CODE AND GUIDE FOR PLUMBING 2006

Updated to July 1, 2010

Ontario

CODE AND GUIDE FOR PLUMBING 2006

Volume 1

containing the Building Code Act, 1992 and
O. Reg. 350/06

July 1, 2010 update

Ministry of Municipal Affairs and Housing
Building and Development Branch

Ontario

COMMENCEMENT

Ontario Regulation 350/06 comes into force on the 31st day of December, 2006. Amending Ontario Regulation 423/06 comes into force on the 31st day of December, 2006.

r_1 Amending Ontario Regulation 137/07 comes into force on the 2nd day of April, 2007.

$r_{1.1}$ Amending Ontario Regulation 137/07 comes into force on the 1st day of July, 2007.

r_3 Amending Ontario Regulation 365/09 comes into force on the 24th day of September, 2009.

r_4 Amending Ontario Regulation 503/09 comes into force on the 1st day of January, 2010.

$r_{5.1}$ Amending Ontario Regulation 503/09 comes into force on the 1st day of July, 2010.

r_6 Amending Ontario Regulation 503/09 comes into force on the 1st day of January, 2011.

r_7 Amending Ontario Regulation 503/09 comes into force on the 1st day of January, 2012.

m_2 Ruling of the Minister of Municipal Affairs and Housing (Minister's Ruling) MR-07-S-03 takes effect on the 2nd day of April, 2007.

m_5 Ruling of the Minister of Municipal Affairs and Housing (Minister's Ruling) MR-09-S-06 takes effect on the 2nd day of June, 2009.

m_8 Ruling of the Minister of Municipal Affairs and Housing (Minister's Ruling) MR-09-S-09 takes effect on the 1st day of January, 2010.

m_{10} Ruling of the Minister of Municipal Affairs and Housing (Minister's Ruling) MR-09-S-11 takes effect on the 1st day of January, 2011.

ERRATA

e_1 Issued April 2nd, 2007.

e_2 Issued June 2nd, 2009.

e_3 Issued January 1st, 2010.

ACKNOWLEDGMENT

The Ministry of Municipal Affairs and Housing gratefully acknowledges the contribution of Mr. Rainier Blundel of George Brown College for the plumbing illustrations contained in Appendix A of this document.

© Copyright Queen's Printer for Ontario 2010

ISBN 978-1-4435-2863-4

All rights reserved.
Questions regarding copyright, including reproduction and distribution, may be directed to the Director, Building and Development Branch of the Ministry of Municipal Affairs and Housing.

Preface

Introduction

The Building Code is a regulation made under the *Building Code Act, 1992*. The 2006 Building Code was enacted by Ontario Regulation 350/06 which came into force on December 31, 2006.

Based on the 2006 Building Code Compendium, this edition contains only provisions and explanatory material related to plumbing and is prepared for purposes of convenience. For the authoritative text of the Building Code regulation, see the official volumes.

The 2006 Building Code updates the previous edition of the Building Code, which dates from 1997. Many of the changes introduced into the 2006 Building Code increase the level of harmonization between Ontario's Code and those in other Canadian jurisdictions. As well, the 2006 Building Code is written in an objective-based format which is intended to promote innovation and flexibility in design and construction.

Objective-Based Code Format

The 2006 Building Code is Ontario's first to be published in an objective-based format. The objective-based format augments specific technical requirements by identifying the underlying objectives and sub-objectives of those requirements (see table below). Each technical requirement that is an acceptable solution in Division B is linked to one or more of the objectives, as well as functional statements, through the Attribution Tables in Supplementary Standard SA-1.

Some objectives were developed jointly by the NRC and Canadian provincial/territorial jurisdictions.

The objective-based format is intended to assist Building Code users to understand the "why" behind Code requirements, as well as the "what". This new format is more flexible and more responsive to innovation, as it should provide Code users with more information to evaluate construction equivalents and acceptable alternatives to the requirements of the Code.

The objective-based framework establishes a framework for evaluating "alternative solutions" against the performance achieved by the "acceptable solutions" set out in the Code.

Objective	Sub-Objective
Safety	Fire Safety
	Structural Safety
	Safety in Use
	Resistance to Unwanted Entry
Health	Indoor Conditions
	Sanitation
	Noise Protection
	Vibration and Deflection Limitation
	Hazardous Substances Containment
	Privacy*
	View to the Outdoors*
Accessibility	Barrier-free Path of Travel
	Barrier-free Facilities
Fire, Structural Water and Sewage Protection of Buildings	Fire Protection of the Building
	Structural Sufficiency of the Building
	Protection of Adjacent Buildings from Fire
	Protection of Adjacent Buildings from Structural Damage
	Water and Sewage Protection of Buildings and Facilities
Resource Conservation*	Water Conservation*
	Energy Conservation*
Environmental Integrity*	N/A
Conservation of Buildings*	N/A

*Ontario-specific objectives are highlighted in grey.

Objectives

Every technical requirement that is an acceptable solution in Division B is linked to at least one objective, which explains the objective which the requirement is intended to achieve.

Functional Statements

Functional Statements describe what the design and construction of the building must do to achieve the objectives. At least one functional statement is linked to each technical requirement that is an acceptable solution in Division B.

Intent Statements

Intent statements will be published to assist Code users. These statements will be an explanation of the purpose of each requirement and will be written in detailed and plain language. The statements are not part of the Building Code regulation and will be provided for explanatory purposes (similar to Appendix A). Due to the number of intent statements, this user document will likely be available in an electronic format (e.g. CD) and will not be included in the 2006 Building Code Compendium.

Structure of the Objective-Based Code

The Building Code is divided into three Divisions, which are further subdivided into Parts.

Division A Compliance, Objectives and Functional Statements

Part 1 Compliance and General

Part 1 contains organization and application; compliance; interpretation; defined terms, symbols and abbreviations; as well as the list of applicable law for the purposes of obtaining a permit under Sections 8 and 10 of the Act.

Part 2 Objectives

Part 3 Functional Statements

Division B Acceptable Solutions

Part 1 General

Part 1 contains the compliance and general requirements of the code, including organization, application, interpretation, terms and abbreviations, and referenced documents and organization.

Part 3 Fire Protection, Occupant Safety and Accessibility

This Part contains the requirements with respect to health and fire safety, which depend upon the use to which a building is put and its type of occupancy. Subsection 3.7.6. contains plumbing provisions for food premises.

Part 7 Plumbing

Part 7 governs the design, construction and installation of plumbing systems within properties. It also addresses materials required to be certified or in compliance with a testing standard.

Part 9 Housing and Small Buildings

Part 9 provides detailed requirements for the construction of houses and small buildings up to 600 m^2 per floor and 3 storeys in height, and applies to all occupancies except assembly, care or detention and high hazard industrial. Section 9.31. contains provisions for plumbing facilities within dwelling units.

Part 10 Change of Use

Part 10 governs the requirements with respect to a change in major occupancy without any proposed construction to the buildings.

Part 11 Renovation

Part 11 provides for flexibility in meeting life safety requirements when renovating existing buildings, with or without changes in major occupancies of the buildings or parts of the buildings.

Part 12 Resource Conservation

Part 12 regulates energy and water efficiency in buildings. Section 12.4. contains provisions for water efficiency in buildings.

Division C Administrative Provisions

Part 1 General

Part 1 contains several administrative provisions relating to matters such as professional design requirements, permits and inspections, and building permit fees.

Part 2 Alternative Solutions, Disputes, Rulings and Interpretations

Part 2 contains administrative provisions related to the Building Code Commission, the Building Materials Evaluation Commission, Minister's Rulings, Minister's Interpretations, and documentation of alternative solutions.

Part 3 Qualifications

Part 3 contains qualification requirements for chief building officials, inspectors, registered code agencies, designers and on-site sewage installers.

Part 4 Transition, Revocation and Commencement

Part 4 contains the transition rules from the outgoing Building Code to the 2006 Building Code. It also contains the revocation of the outgoing Building Code and the commencement date of the 2006 Building Code.

Appendix A Explanatory Information

Appendix A contains additional non-regulatory explanatory information to assist Code users in understanding the intent of the requirements contained in Divisions A, B and C.

Appendix B Imperial Conversion

Appendix B contains Imperial conversion factors for metric values used in the Code. It is not a regulatory section of the 2006 Building Code Compendium.

Supplementary Standards

The Supplementary Standards supersede the former Supplementary Guidelines referenced by the 1997 Building Code.

Supplementary Standards with the SA prefix are referenced by Division A of the Building Code. They include the Attribution Tables which relate objectives and functional statements of Division A to acceptable solutions of Division B.

Supplementary Standards with the SB prefix are referenced by Division B of the Building Code. They include climatic and seismic data in Supplementary Standard SB-1.

Supplementary Standards with the SC prefix are referenced by Division C of the Building Code. They include administrative provisions (e.g., Code of Conduct for Registered Code Agencies).

Code Development

Work on Ontario's 2006 Building Code began in 1998 through a joint Federal/Provincial/Territorial process coordinated by the Canadian Commission on Building and Fire Codes (CCBFC) and supported by the National Research Council (NRC). The objectives of this coordinated strategy were to achieve greater harmonization among the model National codes and provincial codes, and create a more uniform code development process.

New editions of the model National Building, Plumbing and Fire Codes (mNBC, mNPC and mNFC) were released in September 2005, although these Codes have no legal status unless adopted by a province, territory or municipality.

Ontario's 2006 Building Code is a regulation made under the *Building Code Act, 1992* and applies throughout Ontario and is based in large measure on the 2005 mNBC and mNPC. However, differences between the model National Codes and Ontario's Building Code occur. Ontario's 2006 Building Code has Ontario-specific requirements in areas such as energy efficiency, water conservation, renovation of existing buildings, and barrier-free access. Ontario has also moved to consolidate construction requirements from other legislation into the Building Code, including those related to on-site sewage systems, pools, spas, food premises, private sewers and private water supplies.

Additional Information

Metric Conversion

For the most part, the official units of measurement in the Code are based on the metric system. However, imperial equivalent values which appear in brackets in Part 9 of Division B are included for convenience only.

Part 7 of Division B has pipe sizes expressed in inches. These are nominal dimensions by which pipe is known in the trade and the exact dimension may vary with different pipe materials.

Numbering System

A decimal numbering system has been used to identify particular requirements. The first number indicates the Part of the Code, the second, the Section in the Part, the third, the Subsection and the fourth, the Article in the Subsection. An Article may be further broken down into Sentences (indicated by numbers in brackets), and the Sentence further divided into Clauses and Subclauses. These are illustrated as follows:

3	Part
3.6.	Section
3.6.2.	Subsection
3.6.2.3.	Article
3.6.2.3.(1)	Sentence
3.6.2.3.(1)(f)	Clause
3.6.2.3.(1)(f)(i)	Subclause
3.6.2.3.(1)(f)(i)(A)	Sub-subclause
12.3.4.5.(6).1.	Paragraph

Highlights of Changes to Plumbing Systems

Significant changes to Part 7 of Division B include the following:

- The venting requirements in the Code have been revised for greater harmony with those in the mNPC in order to facilitate the work of designers and trades operating in various jurisdictions through out Canada. Wet venting has been changed to combine single storey and multi-storey wet venting. Single storey wet venting is now accommodated by circuit venting. Circuit venting and limits on the length of trap arms were added.

- The requirements for backflow prevention have been expanded to address new types of materials and system designs for use in certain fire systems.

- Macerating toilets are to conform to CSA standard B45.9, "Macerating Systems and Related Components".

- Air admittance valves are permitted in some applications.

Guideline for Requesting Changes to the Building Code

Request a Code Change

The Building Code improves with each edition thanks to the contributions of building officials, designers, builders, contractors, product manufacturers, researchers, building owners and the public. Typical changes accommodate new materials, systems and building design, clarify requirements, or update references to standards.

The Building Code is a regulation made under the *Building Code Act, 1992*. Given the joint Federal/Provincial/Territorial Code development process, changes developed by CCBFC for the mNBC and the mNPC are considered for inclusion in Ontario's Building Code. Suggestions for changes to the Building Code made by members of the public may also be considered. Potential changes to the Building Code are generally developed following a public consultation process and review by a Building Code technical committee.

Suggestions to improve the Building Code may be submitted to the Building and Development Branch of the Ministry of Municipal Affairs and Housing. The following points should be considered in developing a request for a Building Code change:

Clarity

Code change requests should clearly identify the specific change being proposed, current Code provisions that would be affected by the change, and the rationale for proposing the change. Proposed language for new Code provisions is helpful.

Supporting Documentation

Code change requests should be accompanied by sufficient documentation to support the need for the change. Documentation may include research, testing results, statistics, case studies, etc.

Cost/Benefit Analysis

Code change requests should include information on implementation costs and the benefits likely to be achieved.

Assessment of Conformance

Code change requests may not be viable if there are no practical means of assessing conformance with the proposed new requirement. Requests should consider whether there are existing tools or models that can be used to assess the conformance of designs or construction with the requirements of the proposed Code change.

Requests also need to consider whether the implementation of Code changes would have implications for enforcement bodies.

Timing

Although requests for changes to the 2006 Building Code can be made at any time, it is likely that most changes will be considered for inclusion in the next edition the Building Code. However, "interim" Code changes to the 2006 Code are possible.

Objectives

The objectives of the Building Code's requirements ("acceptable solutions") are set out in Division A. Code change requests should link proposed changes to one of the Code's stated objectives. The addition of a provision that cannot be linked to one of the currently stated objectives would require the addition of new objectives.

Focus on Generic/Widespread Issues

The Building Code's standards are of general application and it is therefore impractical for the Building Code to deal with specific products or with situations that arise only rarely.

However, innovative products that are not yet covered by standards or mentioned in the Codes are not necessarily excluded from use. Current administrative procedures to enable the use of innovative products are listed in Division C, and include Alternative Solutions, the Building Code Commission, the Building Materials Evaluation Commission and Minister's Rulings.

The attached form should accompany requested changes, although its use is not mandatory provided the criteria stated above are considered. Where the form does not provide sufficient space for the information you wish to include, you are encouraged to attach additional pages as necessary. Additional electronic copies of the Building Code change request form may be obtained from the Building Code website at: www.ontario.ca/buildingcode.

2006 BUILDING CODE CHANGE REQUEST FORM

CONTACT INFORMATION:

Do you agree to permit sharing all information on this form with Building Code Review Committees and the Canadian Commission on Building and Fire Codes for the purposes of code development?

☐ YES
☐ NO

I am submitting this on behalf of: ☐ Myself, or
☐ Organization: ______
Your Title: ______

Your Name: ______
Address: ______
City: ______
Province: ______
Postal Code: ______
Telephone: ______
Facsimile: ______
Email: ______

Your function:
(if submitting on behalf of yourself)

☐ Builder / Contractor
☐ Building Official
☐ Building Owner / Manager
☐ Designer / Architect / Engineer
☐ Home Owner / General Public
☐ Supplier / Manufacturer
☐ Other: ______

CODE CHANGE REQUEST:

☐ To an existing code provision: ______
Code Reference of the Requested Change:
Division, Part, Section, Subsection, Article, Sentence, etc. eg: Div. B, 9.32.3.5.(1)
☐ Add a new code provision

Have you forwarded this change to the Canadian Commission on Building and Fire Codes as a proposed amendment to the model National Building or Plumbing Codes?

☐ YES
☐ NO

Personal information provided on this form is collected under the authority of the Building Code Act, 1992 and will be used for the purpose of code development. Please direct any questions about the collection of information by mail to the following address:

Manager, Code Development, Legislation and Appeals
Building and Development Branch, 777 Bay Street 2nd Floor,
Toronto, Ontario M5G 2E5
Telephone: (416) 585-6666
or by Facsimile at: (416) 585-7531

REQUESTED CHANGE/ADDITION: What wording do you propose for the change?	
PROBLEM: Why should the existing provision be revised? If requesting an addition to the Code, what is missing?	
JUSTIFICATION/EXPLANATION: How does the requested change address the problem?	
OBJECTIVE(S): Which of the Code's objectives does the requested change address? See Part 2 of Division A of the Building Code for the list of objectives.	
COST/BENEFIT IMPLICATIONS: Will the change entail any added costs? Will it provide benefits that are measurable?	
ENFORCEMENT IMPLICATIONS: Can the requested change/addition be enforced by the infrastructure available to enforce this Code? Will its enforcement require an increase in resources?	
OTHER COMMENTS: For example, identify other Code requirements affected by the requested change, etc.	
ATTACHED SUPPORTING MATERIAL:	

Present only one change request per form. Duplicate the form as necessary. You may attach additional pages or use any other format to submit your request as long as all the information indicated above is included. Mail or fax to:

Director, Building and Development Branch
Ministry of Municipal Affairs and Housing
777 Bay Street 2nd Floor
Toronto, Ontario M5G 2E5
Fax: (416) 585-7531

Code Amendment History

The first Ontario Building Code was issued in 1975. The 1975 and subsequent editions of the Building Code have been issued as follows:

Building Code Edition	Date Filed	Effective Date
O. Reg. 925/75 (1975 Building Code)	November 24, 1975	December 31, 1975
O. Reg. 583/83 (1983 Building Code)	September 15, 1983	November 30, 1983
O. Reg. 419/86 (1986 Building Code)	July 18, 1986	October 20, 1986
O. Reg. 413/90 (1990 Building Code)	July 30, 1990	October 1, 1990
O. Reg. 403/97 (1997 Building Code)	November 3, 1997	April 6, 1998
O. Reg. 350/06 (2006 Building Code)	June 28, 2006	December 31, 2006

The following Table lists the amendments to the 2006 Building Code made since the filing of O. Reg. 350/06:

AMENDMENTS TO THE 2006 BUILDING CODE - ONTARIO REGULATION 350/06			
Amendment	Date Filed	Effective Date	Nature of Amendment
O. Reg. 423/06	Aug 29, 2006	Dec 31, 2006	Definition of Applicable Law
O. Reg. 137/07	April 2, 2007	April 2, 2007	Editorial revisions; tall stud tables A-30 to A-33
		July 1, 2007	Part 3 stud wall reinforcement and plumbing fixtures
O. Reg. 205/08	June 18, 2008	April 1, 2010	Residential fire sprinklers
O. Reg. 365/09	Sept 23, 2009	Sept 24, 2009	Definition of applicable law
O. Reg. 503//09	Dec 21, 2009	Jan 1, 2010 April 1, 2010 Jan 1, 2011 Jan 1, 2012	Housekeeping changes Residential fire sprinklers Low flow water closets Energy efficiency

The following Table lists Minister's Rulings that have been made to adopt amendments to codes, formulae, standards, guidelines or procedures referenced in the 2006 Building Code:

MINISTER'S RULINGS TO ADOPT AMENDMENTS TO CODES, FORMULAE, STANDARDS, GUIDELINES OR PROCEDURES REFERENCED IN THE 2006 BUILDING CODE

Ruling Number	Date of Ruling	Effective Date	Nature of Amendment
MR-06-S-01	Aug 15, 2006	Dec 31, 2006	Supplementary Standards SA-1, SB-1, SB-2, SB-3, SB-4, SB-5, SB-6, SB-7, SB-8, SB-9, SB-10, SB-11, SC-1
MR-07-S-02	March 9, 2007	March 9, 2007	Revise Table 1.3.1.2. of Division B Revise Supplementary Standard SB-5
MR-07-S-03	April 2, 2007	April 2, 2007	Revise Table 1.3.1.2. of Division B Revise Supplementary Standard SB-10
MR-08-S-04	June 18, 2008	April 1, 2010	Revise Supplementary Standards SA-1, SB-4
MR-08-S-05	June 18, 2008	June 18, 2008	Revise Supplementary Standards SB-1, SB-2, SB-5
MR-09-S-06	June 2, 2009	June 2, 2009	Revise Table 1.3.1.2. of Division B
MR-09-S-07	June 9, 2009	June 9, 2009	Revise Supplementary Standard SB-2
MR-09-S-08	Nov 30, 2009	Jan 1, 2010	New Supplementary Standard SB-12
MR-09-S-09	Dec 31, 2009	Jan 1, 2010	Revise Supplementary Standards SA-1, SB-2, SB-5, SB-10
MR-09-S-10	Dec 31, 2009	April 1, 2010	Revise Supplementary Standard SA-1
MR-09-S-11	Dec 31, 2009	Jan 1, 2011	Revise Supplementary Standard SA-1

BUILDING CODE ACT, S.O. 1992, c.23

as amended by:

S.O. 1997, c.24, s.224, except s.224(17), in force June 17, 1998
S.O. 1997, c.30, Schedule B, s.1-20 in force April 6, 1998
S.O. 1999, c.12, Schedule M, s.1-11 in force December 22, 1999
S.O. 2000, c.5, s.7 in force January 1, 2001
S.O. 2000, c.26, Schedule K, s.1 in force December 6, 2000
S.O. 2002, c.9, s.5, 6(1),(2), 16, 24, 25; 27, 31(1), 34, 40(1), 41(1), 43, 51(6),(9),(11)-(15), 53(3), 54, in force September 1, 2003
S.O. 2002, c.9, s.1-4, 6(3), 7-15, 17-19, 20(1),(2), 21-23, 26, 28-30, 31(2), 32, 33, 35-39, 40(2),(3), 41(2), 42, 44-50, 51(1),(2), (4),(5),(7),(8),(10), 52, 53(1),(2) in force July 1, 2005
S.O. 2002, c.17, Schedule C, s.1-6 in force July 1, 2005
S.O. 2002, c.17, Schedule F, Table in force January 1, 2003
S.O. 2005, c.33, s.1 in force December 15, 2005
S.O. 2006, c.19, Schedule O, ss.1, 2 in force June 22, 2006
S.O. 2006, c.32, Schedule C, s.3, in force January 1, 2007
S.O. 2006, c.21, Schedule F, s.104 in force July 25, 2007
S.O. 2006, c.22, s.112(8) in force July 3, 2007
S.O. 2006, c.35, Schedule C, s.8 in force August 20, 2007
S.O. 2009, c.12, Schedule J, ss.1, 2 in force May 14, 2009
S.O. 2009, c.33, Schedule 21, s.2(1) in force December 15, 2009
S.O. 2009, c.33, Schedule 21, ss.2(4),(7),(8),(9) in force July 1, 2010

CONTENTS

Interpretation
1. Definitions
1.1 Roles of Various Persons

Enforcement Authorities
2. Administration
3. Enforcement by Municipalities
3.1 Enforcement, Boards of Health
4. Provincial Enforcement
4.1 Enforcement by Registered Code Agency Appointed by a Principal Authority
4.2 Enforcement by Registered Code Agency Appointed by an Applicant
5. Agreements re Enforcement
6. Agreement re Review of Plans
6.1 Agreement re Plumbing

6.2 Agreement re Sewage Systems
7. By-laws, Resolutions, Regulations
7.1 Code of Conduct

Construction and Demolition

8. Building Permits
9. Reserved
10. Change of Use
10.1 Prohibition re Sewage Systems

10.2 Notice of Readiness for Inspection
11. Occupancy or Use after Completion
12. Inspection of Building Site
13. Order Not to Cover
14. Stop Work Order

Property Standards

15. Reserved
15.1 Municipal Property Standards
15.2 Inspection of Property Without Warrant
15.3 Appeal of Order
15.4 Power of Municipality if Order not Complied with
15.5 Certificate of Compliance
15.6 Property Standards Committee
15.7 Emergency Order re Dangerous Non-Conformity with Standards
15.8 Inspection Powers of Officer

Unsafe Buildings

15.9 Inspection of Unsafe Buildings
15.10 Emergency Order where Immediate Danger

Maintenance Inspection Programs

15.10.1 Maintenance Inspections

Qualifications

15.11 Qualifications for Various Positions
15.12 Qualifications re Sewage Systems
15.13 Duty to have Insurance

Powers and Duties of Registered Code Agencies

15.14 Notice to Chief Building Official
15.15 Functions of Registered Code Agencies
15.16 Scope of Agency's Powers
15.17 Persons Acting on Behalf of an Agency

15.18 Duties re Certificates and Orders
15.19 Expiry of an Agency's Appointment
15.20 Termination of an Agency's Appointment
15.21 Order to Suspend Construction
15.22 Conflict Between Appointment and Act, etc.

General Powers of Inspection and Enforcement

15.23 Duty to Carry Identification
16. Entry into Dwellings
17. Reserved
17.1 Recovery of Expenditures for Repairs, etc.
18. Powers of Inspector
19. Obstruction of Inspector, etc.
20. Obstruction or Removal of Order
21. Warrant for Entry and Search

Dispute Resolution, Reviews and Appeals

22. Review of Inspector's Order
23. Building Code Commission
24. Dispute Resolution
25. Appeal to Court
26. Further Appeal
27. Service

Authorizations and Rulings

28. Building Materials Evaluation Commission
28.1 Binding Interpretations by the Minister
29. Rulings by Minister
30. Inquiry

General

31. Immunity from Action
32. Reserved
32.1 Reserved
33. Reserved
34. Regulations
35. Municipal By-laws
35.1 Status of Conservation Authority Regulations
36. Offences
37. Proof of Directions, Orders, etc.
38. Restraining Order
38.1 Suspension of Licence

Interpretation

1. (1) Definitions. In this Act,

"building" means,

(a) a structure occupying an area greater than ten square metres consisting of a wall, roof and floor or any of them or a structural system serving the function thereof including all plumbing, works, fixtures and service systems appurtenant thereto,
(b) a structure occupying an area of ten square metres or less that contains plumbing, including the plumbing appurtenant thereto,
(c) plumbing not located in a structure,
(c.1) a sewage system; or
(d) structures designated in the building code; ("bâtiment")

"building code" means regulations made under section 34; ("code du bâtiment")

"change certificate" means a certificate prescribed under the building code or approved by the Minister as a change certificate; ("certificat de modification");

"chief building official" means a chief building official appointed or constituted under section 3 or 4; ("chef du service du bâtiment")

"code of conduct" means a code of conduct described in section 7.1; ("code de conduite");

"construct" means to do anything in the erection, installation, extension or material alteration or repair of a building and includes the installation of a building unit fabricated or moved from elsewhere and "construction" has a corresponding meaning; ("construire", "construction", "travaux de construction")

"demolish" means to do anything in the removal of a building or any material part thereof and "demolition" has a corresponding meaning; ("démolir", "démolition", "travaux de démolition")

"director" means the person appointed as director under section 2; ("directeur")

"final certificate" means a certificate prescribed under the building code or approved by the Minister as a final certificate"; ("certificat définitif");

"inspector" means an inspector appointed under section 3, 3.1, 4, 6.1 or 6.2; ("inspecteur")

"maintenance inspection" means an inspection conducted under a maintenance inspection program; ("inspection d'entretien")

"maintenance inspection program" means a program established under clause 7(1)(b.1) or subsection 34(2.2); ("programme d'inspections d'entretien")

"Minister" means the Minister of Municipal Affairs and Housing; ("ministre")

"municipality" means a local municipality; ("municipalité")

"officer" means a property standards officer who has been assigned the responsibility of administering and enforcing by-laws passed under section 15.1; ("agent")

"planning board" means a planning board established under section 9 or 10 of the *Planning Act*; ("conseil d'aménagement")

"plans review certificate" means a certificate prescribed under the building code or approved by the Minister as a plans review certificate; ("certificat d'examen des plans")

"plumbing" means a drainage system, a venting system and a water system or parts thereof; ("installation de plomberie")

"principal authority" means,
- (a) the Crown,
- (b) the council of a municipality,
- (c) an upper-tier municipality that has entered into an agreement under subsection 3(5), 6.1(1) or 6.2(1),
- (d) a board of health that has been prescribed for the purposes of subsection 3.1(1) or has entered into an agreement under subsection 6.1(2) or (3) or 6.2(2),
- (e) a planning board that has been prescribed for the purposes of subsection 3.1(1), or
- (f) a conservation authority that has been prescribed for the purposes of subsection 3.1(1) or has entered into an agreement under subsection 6.2(2); ("autorité principale");

"registered code agency" means a person that has the qualifications and meets the requirements described in subsection 15.11(4); ("organisme inscrit d'exécution du code")

"regulations" means regulations made under this Act. ("règlements") 1992, c.23, s.1(1); 1997, c.24, s.224(1, 2); 1997, c.30, Sched. B, s.1; 1999, c.12, Sched. M, s.1; 2002, c.9, s.2(1-3); 2002, c.17, Sched. C, s.1(1); 2002, c.17, Sched. F, Table; 2006, c.19, Sched. O, s.1(1); 2006, c. 21, Sched. F, s.104(1-3); 2006, c.22, s.112(1).

(1.1) Interpretation. Except as provided in subsection (1.2), a reference to "this Act" in any provision of this Act shall be deemed to be a reference to this Act excluding sections 15.1 to 15.8. 1997, c.24, s.224(3)

(1.2) Same. A reference to "this Act" in subsection 1(1) and sections 2, 16, 19, 20, 21, 27, 31, 36 and 37 includes a reference to sections 15.1 to 15.8. 1997, c.24, s.224(3)

(1.3) Chief Building Official. A reference to the "chief building official" in this Act, other than in subsections 1(1), 3(2), (3) and (6) and section 4, includes an inspector who has the same powers and duties as the chief building official,

(a) in relation to sewage systems by virtue of subsections 3.1(3) or 6.2(4); and

(b) in relation to plumbing by virtue of subsection 6.1(5). 2002, c.9, s.2(4)

(2) Exclusion. This Act does not apply to structures used directly in the extraction of ore from a mine. 1992, c.23, s.1(2)

1.1 (1) Role of Various Persons. It is the role of every person who causes a building to be constructed,

(a) to cause the building to be constructed in accordance with this Act and the building code and with any permit issued under this Act for the building;

(b) to ensure that construction does not proceed unless any permit required under this Act has been issued by the chief building official; and

(c) to ensure that construction is carried out only by persons with the qualifications and insurance, if any, required by this Act and the building code. 2002, c.9, s.3

(2) Role of Designers. It is the role of a designer,

(a) if the designer's designs are to be submitted in support of an application for a permit under this Act, to provide designs which are in accordance with this Act and the building code and to provide documentation that is sufficiently detailed to permit the design to be assessed for compliance with this Act and the building code and to allow a builder to carry out the work in accordance with the design, this Act and the building code;

(b) to perform the role described in clause (a) in respect of only those matters for which the designer has the qualifications, if any, required by this Act and the building code; and

(c) if the building code requires that all or part of the design or construction of a building be under general review, to perform the general review in respect of only those matters for which the designer has the qualifications, if any, required by this Act and the building code. 2002, c.9, s.3

(3) Role of Builders. It is the role of a builder,

(a) to ensure that construction does not proceed unless any permit required under this Act has been issued by the chief building official;

(b) to construct the building in accordance with the permit;

(c) to use appropriate building techniques to achieve compliance with this Act and the building code; and

(d) when site conditions affect compliance with the building code, to notify the designer and an inspector or the registered code agency, as appropriate. 2002, c.9, s.3

(4) Role of Manufacturers, etc. It is the role of manufacturers, suppliers and retailers of products that are intended for use in Ontario in the construction of a building for a purpose that is regulated by this Act or the building code to ensure that the products comply with the standards established under this Act and the building code. 2002, c.9, s.3

(5) Role of Registered Code Agencies. It is the role of a registered code agency,

(a) to exercise powers and perform duties under this Act and the building code in connection with reviewing plans, issuing certificates, inspecting construction and performing other functions in accordance with this Act and the building code; and

(b) to carry out the duties of a registered code agency under this Act and the building code in respect of only those matters for which the registered code agency is qualified under this Act and the building code. 2002, c.9, s.3

(6) Role of Chief Building Officials. It is the role of a chief building official,

(a) to establish operational policies for the enforcement of this Act and the building code within the applicable jurisdiction;
(b) to co-ordinate and oversee the enforcement of this Act and the building code within the applicable jurisdiction;
(c) to exercise powers and perform the other duties assigned to him or her under this Act and the building code; and
(d) to exercise powers and perform duties in accordance with the standards established by the applicable code of conduct. 2002, c.9, s.3

(7) Role of Inspectors. It is the role of an inspector,

(a) to exercise powers and perform duties under this Act and the building code in connection with reviewing plans, inspecting construction, conducting maintenance inspections and issuing orders in accordance with this Act and the building code;
(b) to exercise powers and perform duties in respect of only those matters for which he or she has the qualifications required by this Act and the building code; and
(c) to exercise powers and perform duties in accordance with the standards established by the applicable code of conduct. 2002, c.9, s.3; 2006, c.22, s.112(2)

(8) Limitation. Nothing in this section relieves any person from the duty to comply with any part of this Act or the building code or affects the rights or duties of a person not mentioned in this section in respect of the construction of a building. 2002, c.9, s.3; 2006, c.19, Sched. O, s.1(2)

Enforcement Authorities

2. (1) Administration. The Minister is responsible for the administration of this Act. 1992, c.23, s.2(1)

(2) Director. There shall be a director of the Building and Development Branch of the Ministry of Municipal Affairs and Housing who is appointed by the Lieutenant Governor in Council for the purposes of this Act. 2002, c.9, s.5

(3) Acting Director. The director may designate in writing a public servant employed under Part III of the *Public Service of Ontario Act, 2006* who works in the Ministry of Municipal Affairs and Housing to exercise the powers and perform the duties of the director in his or her absence or if he or she is unable to act. 2009, c.33, Sched. 21, s.2(1)

(4) Delegation. The director may delegate in writing any of his or her powers or duties to one or more public servants employed under Part III of the *Public Service of Ontario Act, 2006* who work in the Ministry of Municipal Affairs and Housing, and may impose conditions or restrictions with respect to the delegation. 2009, c.33, Sched. 21, s.2(1)

3. (1) Enforcement by Municipalities. The council of each municipality is responsible for the enforcement of this Act in the municipality, except where otherwise provided by this Act. 2002, c.9, s.6(1)

(2) Chief Building Official, Inspectors. The council of each municipality shall appoint a chief building official and such inspectors as are necessary for the enforcement of this Act in the areas in which the municipality has jurisdiction. 1992, c.23, s.3(2)

(2.1) Repealed. 2002, c.9, s.6(2)

(3) Joint Enforcement. The councils of two or more municipalities may enter into an agreement,

(a) providing for the joint enforcement of this Act within their respective municipalities;
(b) providing for the sharing of costs incurred in the enforcement of this Act within their respective municipalities; and
(c) providing for the appointment of a chief building official and inspectors. 1992, c.23, s.3(3)

(4) Joint Jurisdiction. If an agreement under subsection (3) is in effect, the municipalities have joint jurisdiction in the area comprising the municipalities. 1992, c.23, s.3(4)

(5) Enforcement by Upper-Tier. The council of an upper-tier municipality and of one or more municipalities in the upper-tier municipality may enter into an agreement for the enforcement by the upper-tier municipality of this Act in the municipalities and for charging the municipalities the whole or part of the cost. 2002, c.17, Sched. F, Table

(6) Power of Upper-Tier. If an agreement under subsection (5) is in effect, the upper-tier municipality has jurisdiction for the enforcement of this Act in the municipalities that are parties to the agreement and shall appoint a chief building official and such inspectors as are necessary for that purpose. 2002, c.17, Sched. F, Table

(7) Repealed. 2002, c.17, Sched. F, Table

(8) Certificate. The clerk of the municipality or upper-tier municipality shall issue a certificate of appointment bearing the clerk's signature or a facsimile of it to the chief building official and each inspector appointed by the municipality or upper-tier municipality. 1992, c.23, s.3(8); 2002, c.17, Sched. F, Table

(9) Records. Every municipality and every upper-tier municipality that has jurisdiction for the enforcement of this Act shall retain such records as may be prescribed by regulation for the prescribed period of time. 2002, c.9, s.6(3); 2002, c.17, Sched. C, s.2

3.1 (1) Enforcement, Boards of Health. A board of health, a planning board or a conservation authority prescribed in the building code is responsible for the enforcement of the provisions of this Act and the building code related to sewage systems in the municipalities and territory without municipal organization prescribed in the building code. 1997, c.30, Sched. B, s.3; 1999, c.12, Sched. M, s.2(1)

(2) Inspectors. The board of health, planning board or conservation authority shall appoint such sewage system inspectors as are necessary for the enforcement of this Act in the areas in which the board of health, planning board or conservation authority has jurisdiction under subsection (1). 1997, c.30, Sched. B, s.3; 1999, c.12, Sched. M, s.2(2)

(3) Powers. A sewage system inspector appointed under this section in an area of jurisdiction or, if there is more than one inspector in the area of jurisdiction, the inspector designated by the board of health, planning board or conservation authority has the same powers and duties in relation to sewage systems as does the chief building official in respect of buildings. 1997, c.30, Sched. B, s.3; 1999, c.12, Sched. M, s.2(3)

(4) Jurisdiction. A board of health, planning board or conservation authority prescribed for the purposes of subsection (1) has jurisdiction for the enforcement of this Act in the prescribed municipalities and territory without municipal organization. 1997, c.30, Sched. B, s.3; 1999, c.12, Sched. M, s.2(4)

(5) Responsibility. If sewage system inspectors have been appointed under this section, the chief building official and inspectors appointed under section 3 or 4 shall not exercise their powers under this Act in respect of sewage systems. 1997, c.30, Sched. B, s.3

(6) Certificate. The medical officer of health or the secretary-treasurer of a planning board or conservation authority shall issue a certificate of appointment bearing his or her signature, or a facsimile of it, to each sewage system inspector appointed by the board of health, planning board or conservation authority. 1997, c.30, Sched. B, s.3; 1999, c.12, Sched. M, s.2(5)

(7) Records. Every board of health, planning board and conservation authority prescribed for the purposes of subsection (1) shall retain such records as may be prescribed by regulation for the prescribed period of time. 2002, c.9, s.7

4. (1) Provincial Enforcement. Subject to section 3.1, Ontario is responsible for the enforcement of this Act in a territory without municipal organization. 1992, c.23, s.4(1); 1997, c.30, Sched. B, s.4

(2) Agreements. The council of a municipality and the Crown in right of Ontario represented by the Minister may enter into an agreement providing for the enforcement of this Act in the municipality by Ontario subject to such payment in respect of costs as is set out in the agreement. 1992, c.23, s.4(2)

(3) Idem. If an agreement under subsection (2) is in effect, Ontario has jurisdiction for the enforcement of this Act in the municipality. 1992, c.23, s.4(3)

(4) Inspectors. Inspectors necessary for the enforcement of this Act in the areas in which Ontario has jurisdiction shall be appointed under Part III of the *Public Service of Ontario Act 2006*. 1992, c.23, s.4(4); 2006, c.35, Sched.C, s.8(1)

(5) Chief Building Official. The director is the chief building official for the areas in which Ontario has jurisdiction. 1992, c.23, s.4(5)

(6) Certificate. The Deputy Minister of Municipal Affairs and Housing shall issue a certificate of appointment bearing his or her signature or a facsimile of it to the director and each inspector appointed under subsection (4). 1992, c.23, s.4(6); 1997, c.24, s.224(5)

4.1 (1) Enforcement by Registered Code Agency Appointed by a Principal Authority. Subject to this Act and the building code, a principal authority may enter into agreements with registered code agencies authorizing the agency to perform the functions specified in the agreement in respect of the construction of any building or class of building specified in the agreement. 2002, c.9, s.8

(2) Appointment. After entering into the agreement with the registered code agency, the principal authority may appoint the agency to perform specified functions in respect of the construction of a building or class of buildings. 2002, c.9, s.8

(3) Delegation of Power to Appoint. The principal authority may delegate, in writing, to the chief building official the authority to make appointments described in subsection (2), and may impose conditions or restrictions with respect to the delegation. 2002, c.9, s.8

(4) Same. Unless otherwise provided in the building code, an appointment of a registered code agency may authorize the agency to perform all of the applicable functions described in section 15.15,

(a) before a permit is issued under section 8;
(b) after a permit is issued under section 8; or
(c) both before and after a permit is issued under section 8. 2002, c.9, s.8

(5) Conflicts. A registered code agency shall not accept an appointment in the circumstances set out in the building code or if it would have a conflict of interest as determined in accordance with the building code. 2002, c.9, s.8

(6) Effect of Appointment. A registered code agency shall perform the functions specified in the appointment for the construction of a specified building or class of buildings and subject to the restrictions set out in this Act and the building code, and shall do so in the manner and subject to the restrictions, if any, set out in the building code. 2002, c.9, s.8

(7) Same. The duty of the registered code agency to perform those functions begins when the appointment is made and ends when the appointment expires as described in section 15.19 or is terminated in accordance with section 15.20. 2002, c.9, s.8

(8) Notice to the Director. A principal authority that appoints a registered code agency shall give the director such information as may be prescribed by regulation. 2002, c.9, s.8

4.2 (1) Enforcement by Registered Code Agency Appointed by an Applicant. This section applies only if a principal authority authorizes it, by regulation, by-law or resolution, as the case may be, to apply within the jurisdiction of the principal authority. 2002, c.9, s.8

(2) Appointment. Subject to this Act and the building code, a prescribed person who is entitled to apply for a permit under section 8 of this Act may appoint a registered code agency to perform all of the functions described in section 15.15 in respect of the construction of a building. 2002, c.9, s.8

(3) Exception. Subsection (2) does not apply,

(a) if a registered code agency has been appointed by a principal authority to perform any function in respect of the construction; or

(b) if an inspector has begun to perform any function in respect of the construction. 2002, c.9, s.8

(4) Manner of Appointment. The appointment must be made in writing in the prescribed manner and is subject to the prescribed conditions and restrictions. 2002, c.9, s.8

(5) Conflicts. A registered code agency shall not accept an appointment in the circumstances set out in the building code or if it would have a conflict of interest as determined in accordance with the building code. 2002, c.9, s.8

(6) Effect of Appointment. A registered code agency shall perform its functions for the specified building subject to the restrictions set out in this Act and the building code and shall do so in the manner and subject to the restrictions, if any, set out in the building code. 2002, c.9, s.8

(7) Same. The duty of the registered code agency to perform those functions begins when the appointment is made and ends when the appointment expires as described in section 15.19 or is terminated in accordance with section 15.20. 2002, c.9, s.8

(8) Replacement Agency. A person who has appointed a registered code agency under subsection (2) in respect of the construction of a building cannot replace the agency after it has begun to perform any function in respect of the construction unless the appointment of that agency has expired as described in section 15.19 or has been terminated in accordance with section 15.20. 2002, c.9, s.8

(9) Notice to Director. The person who appoints a registered code agency under this section shall give the director such information as may be prescribed by regulation. 2002, c.9, s.8

(10) Notice to Chief Building Official. The person who appoints a registered code agency under this section shall give the chief building official such information as may be prescribed by regulation. 2002, c.9, s.8

5. (1) Agreements re Enforcement. The council of a municipality adjacent to territory without municipal organization and the Crown in right of Ontario represented by the Minister may enter into an agreement providing for the enforcement of this Act by the municipality in such part of the territory without municipal organization and subject to such payment in respect of costs as is set out in the agreement. 1992, c.23, s.5(1)

(2) Area of Municipal Jurisdiction. The municipality has jurisdiction for the enforcement of this Act in the area designated in the agreement. 1992, c.23, s.5(2)

(3) Application. An agreement under this section may apply to the enforcement of all or any part of this Act or the building code. 1997, c.30, Sched. B, s.5

6. (1) Agreement re Review of Plans. Two or more principal authorities may enter into an agreement providing for,

(a) the review by a principal authority for compliance with the building code of plans and specifications for the construction of a building within its area of jurisdiction;

(b) an expedited review by another principal authority for compliance with the building code of plans and specifications for the construction of substantially similar buildings;

(c) the allocation of responsibility for reviews for compliance with the building code of plans and specifications for the construction of buildings;

(d) the resolution of disagreements about whether plans and specifications comply with the building code;
(e) indemnification; and
(f) such other matters as may be necessary to give effect to the agreement. 2002, c.9, s.9

(2) Delegation. A principal authority may delegate to the chief building official the authority to make such decisions under an agreement as may be necessary for its implementation. 2002, c.9, s.9

6.1 (1) Agreement re Plumbing. Despite any other provision of this Act, the council of an upper-tier municipality and of one or more municipalities in the upper-tier municipality may enter into an agreement for the enforcement by the upper-tier municipality of the provisions of this Act and the building code related to plumbing in the municipalities and for charging the municipalities the whole or part of the cost. 2002, c.17, Sched. C, s.3(1)

(2) Delegation to Health Unit. If an agreement under subsection (1) is in effect, the council of an upper-tier municipality may by agreement delegate its powers under subsection (1) to a board of health having jurisdiction in the municipalities that are parties to the agreement. 2002, c.9, s.10; 2002, c.17, Sched. C, s.3(2)

(3) Delegation by Municipality. A municipality that is not a party to an agreement under subsection (1) may enter into an agreement with the board of health having jurisdiction in the municipality for the enforcement of the provisions of this Act and the building code relating to plumbing. 2002, c.9, s.10

(4) Plumbing Inspectors. The council of an upper-tier municipality or the board of health may appoint plumbing inspectors for the purpose of this section. 2002, c.9, s.10; 2002, c.17, Sched. C, s.3(3)

(5) Powers. A plumbing inspector appointed under this section or, if there is more than one inspector in the area of jurisdiction, the senior plumbing inspector has the same powers and duties in relation to plumbing as does the chief building official in respect of buildings other than the issuance of conditional permits. 2002, c.9, s.10

(6) Responsibility. If plumbing inspectors have been appointed under this section, the chief building official and inspectors appointed under section 3 or 4 shall not exercise their powers under this Act in respect of plumbing. 2002, c.9, s.10

(7) Application. Subsections 3(8) and (9) and section 7 apply with necessary modifications to the council of an upper-tier municipality or a board of health that has assumed responsibility for plumbing under this section. 2002, c.9, s.10; 2002, c.17, Sched. C, s.3(4)

(8) Transition, Plumbing. If, on July 1, 1993, an upper-tier municipality was carrying out plumbing inspections under the *Ontario Water Resources Act* in the municipalities that formed part of the upper-tier municipality, the upper-tier municipality shall enforce the provisions of this Act and the building code related to plumbing in all of the municipalities forming part of the upper-tier municipality until the council of the upper-tier municipality by by-law determines otherwise, whereupon section 3 applies. 2002, c.17, Sched. C, s.3(5)

(9) Same. Subsections (4) to (7) apply with necessary modifications to an upper-tier municipality that has assumed responsibility for plumbing under subsection (8). 2002, c.9, s.10; 2002, c.17, Sched. C, s.3(6)

(10) Interpretation. For the purpose of subsection (8), an upper-tier municipality that has been deemed to be a county by any general or special Act for the purposes of section 76 of the *Ontario Water Resources Act*, as it read on June 30, 1993, shall be deemed to be an upper-tier municipality that was carrying on plumbing inspections under the *Ontario Water Resources Act* in the municipalities that formed part of the upper-tier municipality for municipal purposes on July 1, 1993. 2002, c.17, Sched. C, s.3(7)

6.2 (1) Agreement re Sewage Systems. Despite any other provision of this Act, the council of an upper-tier municipality and of one or more municipalities in the upper-tier municipality may enter into an agreement for the enforcement by the upper-tier municipality of the provisions of this Act and the building code related to sewage systems in the municipalities and for charging the municipalities the whole or part of the cost. 2002, c.17, Sched. C, s.3(8)

(2) Delegation. A municipality that is not a party to an agreement under subsection (1) may enter into an agreement with a board of health or a conservation authority having jurisdiction in the municipality for the enforcement of the provisions of this Act and the building code related to sewage systems. 2002, c.9, s.10

(3) Inspectors. The council of an upper-tier municipality, board of health or conservation authority may appoint sewage system inspectors for the purposes of this section. 2002, c.9, s.10; 2002, c.17, Sched. C, s.3(9)

(4) Powers. A sewage system inspector appointed under this section in an area of jurisdiction or, if there is more than one inspector in the area of jurisdiction, the inspector designated by the council of an upper-tier municipality, board of health or conservation authority has the same powers and duties in relation to sewage systems as does the chief building official in respect of buildings. 2002, c.9, s.10; 2002, c.17, Sched. C, s.3(10)

(5) Responsibility. If sewage system inspectors have been appointed under this section, the chief building official and inspectors appointed under section 3 or 4 shall not exercise their powers under this Act in respect of sewage systems. 2002, c.9, s.10

(6) Application. Subsections 3(8) and (9) and section 7 apply with necessary modifications to the council of an upper-tier municipality, board of health or conservation authority that has assumed responsibility for sewage systems under this section. 2002, c.9, s.10; 2002, c.17, Sched. C, s.3(11)

7.(1) By-laws, Resolutions, Regulations. The council of a municipality or of an upper-tier municipality that has entered into an agreement under subsection 3(5) or a board of health prescribed for the purposes of section 3.1 may pass by-laws, a planning board prescribed for the purposes of section 3.1 may pass resolutions and a conservation authority prescribed for the purposes of section 3.1 or the Lieutenant Governor in Council may make regulations, applicable to the matters for which and in the area in which the municipality, upper-tier municipality, board of health, planning board, conservation authority or the Province of Ontario, respectively, has jurisdiction for the enforcement of this Act,

(a) prescribing classes of permits under this Act, including permits in respect of any stage of construction or demolition;

(b) providing for applications for permits and requiring the applications to be accompanied by such plans, specifications, documents and other information as is prescribed;

(b.1) subject to the regulations made under subsection 34(2.1), establishing and governing a program to enforce standards prescribed under clause 34(2)(b), in addition to any programs established under subsection 34(2.2);

(b.2) subject to the regulations made under subsection 34(2.2), governing a program established under subsection 34(2.2);

(c) requiring the payment of fees on applications for and issuance of permits and prescribing the amounts thereof;

(c.1) requiring the payment of interest and other penalties, including payment of collection costs, when fees are unpaid or are paid after the due date;

(d) providing for refunds of fees under such circumstances as are prescribed;

(e) requiring a person specified in the building code to give notice to the chief building official or an inspector or to a registered code agency if one is appointed, of any of the stages of construction specified in the building code, in addition to the stages of construction prescribed under subsection 10.2(1) and prescribing the period of time after such notice is given during which an inspection may be carried out;

(f) prescribing forms respecting permits and applications for permits and providing for their use;

(g) enabling the chief building official to require that a set of plans of a building or any class of buildings as constructed be filed with the chief building official on completion of the construction under such conditions as may be prescribed in the building code;

(h) providing for the transfer of permits when land changes ownership;

(i) requiring the person to whom a permit is issued to erect and maintain fences to enclose the site of the construction or demolition within such areas of the municipality as may be prescribed;

(j) prescribing the height and description of the fences required under clause (i). 1992, c.23, s.7; 1997, c.30, Sched. B, s.6; 1999; c.12, Sched. M, s.3; 2002, c.9, s.11(1); 2002, c.17, Sched. F, Table; 2006, c.19, Sched. O, s.1(5), 2006, c.22, s.112(3-5)

(2) Fees. The total amount of the fees authorized under clause (1)(c) must not exceed the anticipated reasonable costs of the principal authority to administer and enforce this Act in its area of jurisdiction. 2002, c.9, s.11(2)

(3) Reduction in Fees. A regulation, by-law or resolution establishing fees under clause (1)(c) must provide for reduced fees to be payable in respect of the construction of a building for which a registered code agency is appointed under section 4.2. 2002, c.9, s.11(2)

(4) Report on Fees. Every 12 months, each principal authority shall prepare a report that contains such information as may be prescribed about any fees authorized under clause (1)(c) and costs of the principal authority to administer and enforce this Act in its area of jurisdiction. 2002, c.9, s.11(2)

(5) Same. The principal authority shall make its report available to the public in the manner required by regulation. 2002, c.9, s.11(2)

(6) Change in Fees. If a principal authority proposes to change any fee imposed under clause (1)(c), the principal authority shall,

(a) give notice of the proposed changes in fees to such persons as may be prescribed; and

(b) hold a public meeting concerning the proposed changes. 2002, c.9, s.11(2); 2006, c.22, s.112(6)

(7) Same, Notice. The notice of proposed changes in fees must contain the prescribed information, including information about the public meeting, and must be given in the prescribed manner. 2002, c.9, s.11(2)

(8) Same, Public Meeting. The public meeting concerning proposed changes in fees must be held within the period specified by regulation before the regulation, by-law or resolution to implement the proposed changes is made. 2002, c.9, s.11(2)

(8.1) Fees may be Added to Tax Roll. Section 398 of the *Municipal Act, 2001* or section 264 of the *City of Toronto Act, 2006*, as the case may be, applies, with necessary modifications, to fees established by a municipality or local board under clause (1)(c) and, with the approval of the treasurer of a local municipality, to fees established under clause (1)(c) by a conservation authority whose area of jurisdiction includes any part of the local municipality. 2006, c.22, s.12(7)

(9) Forms. The power to prescribe forms under clause (1)(f) does not include the power to prescribe a form for a particular purpose where there is a form for that purpose prescribed in the building code or approved by the Minister. 2002, c.9, s.11(2); 2006, c.21, Sched. F, s.104(4)

7.1 (1) Code of Conduct. A principal authority shall establish and enforce a code of conduct for the chief building official and inspectors. 2002, c.9, s.12

(2) Purposes. The following are the purposes of a code of conduct:

(a) To promote appropriate standards of behaviour and enforcement actions by the chief building official and inspectors in the exercise of a power or the performance of a duty under this Act or the building code.

(b) To prevent practices which may constitute an abuse of power, including unethical or illegal practices, by the chief building official and inspectors in the exercise of a power or the performance of a duty under this Act or the building code.

(c) To promote appropriate standards of honesty and integrity in the exercise of a power or the performance of a duty under this Act or the building code by the chief building official and inspectors. 2002, c.9, s.12

(3) Contents. A code of conduct must provide for its enforcement and include policies or guidelines to be used when responding to allegations that the code has been breached and disciplinary actions that may be taken if the code is breached. 2002, c.9, s.12

(4) Public Notice. The principal authority shall ensure that the code of conduct is brought to the attention of the public. 2002, c.9, s.12

Construction and Demolition

8. (1) Building Permits. No person shall construct or demolish a building or cause a building to be constructed or demolished unless a permit has been issued therefor by the chief building official. 1992, c.23, s.8(1); 1997, c.30, Sched. B, s.7(1)

(1.1) Application for Permit. An application for a permit to construct or demolish a building may be made by a person specified by regulation and the prescribed form or the form approved by the Minister must be used and be accompanied by the documents and information specified by regulation. 2002, c.9, s.14(1); 2006, c.21, Sched. F, s.104(5)

(2) Issuance of Permits. The chief building official shall issue a permit referred to in subsection (1) unless,

(a) the proposed building, construction or demolition will contravene this Act, the building code or any other applicable law;

(b) the applicant is a builder or vendor as defined in the *Ontario New Home Warranties Plan Act* and is not registered under that Act;

(c) a person who prepared drawings, plans, specifications or other documents or gave an opinion concerning the compliance of the proposed building or construction with the building code does not have the applicable qualifications, if any, set out in the building code or does not have the insurance, if any, required by the building code;

(d) the plans review certificate, if any, required for the application does not contain the prescribed information;

(e) the application for the permit is not complete; or

(f) any fees due have not been paid. 2002, c.9, s.14(2)

(2.1) Restriction. If the application includes a plans review certificate that contains the prescribed information, the chief building official is not entitled to refuse to issue the permit on the grounds that the proposed construction of the building to which the certificate relates does not comply with the building code. 2002, c.9, s.14(2)

(2.2) Decision. When an application for a permit contains the prescribed information, the chief building official is required to determine within the period prescribed by regulation whether to issue the permit or to refuse to issue it. 2002, c.9, s.14(2)

(2.3) Same, Reasons for Refusal. If the chief building official refuses to issue the permit, he or she shall inform the applicant of all of the reasons for the refusal of the permit and shall do so within the period prescribed by regulation. 2002, c.9, s.14(2)

(3) Conditional Permit. Even though all requirements have not been met to obtain a permit under subsection (2), the chief building official may issue a conditional permit for any stage of construction if,

(a) compliance with by-laws passed under sections 34 and 38 of the *Planning Act* and with such other applicable law as may be set out in the building code has been achieved in respect of the proposed building or construction;

(b) the chief building official is of the opinion that unreasonable delays in the construction would occur if a conditional permit is not granted; and

(c) the applicant and such other person as the chief building official determines agree in writing with the municipality, upper-tier municipality, board of health, planning board, conservation authority or the Crown in right of Ontario to,
  (i) assume all risk in commencing the construction,
  (ii) obtain all necessary approvals in the time set out in the agreement or, if none, as soon as practicable,
  (iii) file plans and specifications of the complete building in the time set out in the agreement,
  (iv) at the applicant's own expense, remove the building and restore the site in the manner specified in the agreement if approvals are not obtained or plans filed in the time set out in the agreement, and
  (v) comply with such other conditions as the chief building official considers necessary, including the provision of security for compliance with subclause (iv). 1992, c.23, s.8(3); 1997, c.30, Sched. B, s.7(2); 1999, c.12, Sched. M, s.5(1); 2002, c.17, Sched. F, Table

(3.1) Delegation re Conditional Permits. A principal authority may, in writing, delegate to the chief building official the power to enter into agreements described in clause (3)(c) and may impose conditions or restrictions with respect to the delegation. 2002, c.9, s.14(3)

(4) Criteria. In considering whether a conditional permit should be granted, the chief building official shall, among other matters, have regard to the potential difficulty in restoring the site to its original state and use if required approvals are not obtained. 1992, c.23, s.8(4)

(5) Registration. Any agreement entered into under clause (3)(c) may be registered against the land to which it applies and the municipality, upper-tier municipality, board of health, planning board, conservation authority or the Province of Ontario, as the case may be, is entitled to enforce its provisions against the owner and, subject to the *Registry Act* and the *Land Titles Act*, any and all subsequent owners of the land. 1999, c.12, Sched. M, s.5(2); 2002, c.17, Sched. F, Table

(6) Enforcement of Agreement. If the chief building official determines that a building has not been removed or a site restored as required by an agreement under clause (3)(c), the chief building official may cause the building to be removed and the site restored and for this purpose the chief building official, an inspector and their agents may enter upon the land and into the building governed by the agreement at any reasonable time without a warrant. 1992, c.23, s.8(6)

(7) Lien. If the building is in a municipality, the municipality shall have a lien on the land for the amount spent on the removal of the building and restoration of the site under subsection (6) and the amount shall have priority lien status as described in section 1 of the *Municipal Act, 2001* or section 3 of the *City of Toronto Act, 2006*, as the case may be. 2002, c.17, Sched. F, Table; 2006, c.32, Sched. C, s.3(1)

(8) Deemed Taxes. If the building is in territory without municipal organization, the amount spent on the removal of the building and restoration of the site under subsection (6) shall be deemed to be taxes imposed under section 3 of the *Provincial Land Tax Act* for the purposes of sections 26 and 27 of that Act. 1992, c.23, s.8(8)

(9) Referral of Plans, etc. Upon reasonable grounds, the chief building official or registered code agency may refer drawings, plans or specifications accompanying applications for permits or the reports arising out of the general review of the construction of a building to the Association of Professional Engineers of Ontario or the Ontario Association of Architects for the purpose of determining if the *Professional Engineers Act* or the *Architects Act* is being contravened. 2002, c.9, s.14(4)

(9.1) Same. At the request of the Association of Professional Engineers of Ontario or the Ontario Association of Architects, the chief building official shall refer documents and information described in subsection (9) to those associations for the purpose of determining if the *Professional Engineers Act* or the *Architects Act* is being contravened. 2002, c.9, s.14(4)

(10) Revocation of Permits. Subject to section 25, the chief building official may revoke a permit issued under this Act,

(a) if it was issued on mistaken, false or incorrect information;

(b) if, after six months after its issuance, the construction or demolition in respect of which it was issued has not, in the opinion of the chief building official, been seriously commenced;

(c) if the construction or demolition of the building is, in the opinion of the chief building official, substantially suspended or discontinued for a period of more than one year;
(d) if it was issued in error;
(e) if the holder requests in writing that it be revoked; or
(f) if a term of the agreement under clause (3)(c) has not been complied with. 1992, c.23, s.8(10)

(11) Prohibition. No person shall construct or demolish a building or cause a building to be constructed or demolished except in accordance with this Act and the building code. 1992, c.23, s.8(11)

(12) Notice of Change. No person shall make a material change or cause a material change to be made to a plan, specification, document or other information on the basis of which a permit was issued without notifying, filing details with and obtaining the authorization of the chief building official. 1992, c.23, s.8(12)

(13) Prohibition. No person shall construct or demolish a building or cause a building to be constructed or demolished except in accordance with the plans, specifications, documents and any other information on the basis of which a permit was issued or any changes to them authorized by the chief building official. 1992, c.23, s.8(13)

(14) Restriction. If a request for authorization referred to in subsection (12) or (13) is accompanied by a change certificate that contains the prescribed information, the chief building official is not entitled to refuse to authorize the change on the grounds that the construction of the building to which the certificate relates does not comply with the building code. 2002, c.9, s.14(5)

9. Repealed. 2009, c.33, Sched. 21, s.2(4)

10. (1) Change of Use. Even though no construction is proposed, no person shall change the use of a building or part of a building or permit the use to be changed if the change would result in an increase in hazard, as determined in accordance with the building code, unless a permit has been issued by the chief building official. 2002, c.9, s.16

(2) Permit. The chief building official shall issue a permit under subsection (1), unless,

(a) the building if used as proposed would result in a contravention of this Act or the building code or any other applicable law;
(b) the application for it is incomplete; or
(c) any fees due are unpaid. 1992, c.23, s.10

10.1 Prohibition re Sewage Systems. No person shall operate or maintain a sewage system or permit a sewage system to be operated or maintained except in accordance with this Act and the building code. 1997, c.30, Sched. B, s.9

10.2 (1) Notice of Readiness for Inspection. At each stage of construction specified in the building code, the prescribed person shall notify the chief building official or the registered code agency, if any, that the construction is ready to be inspected. 2002, c.9, s.17

(2) Inspection. After the notice is received, an inspector or the registered code agency, as the case may be, shall carry out the inspection required by the building code within the prescribed period. 2002, c.9, s.17

11. (1) Occupancy or Use after Completion. Except as authorized by the building code, a person shall not occupy or use a building or part of a building that is newly erected or installed or permit it to be occupied or used until the requirements set out in this section are met. 2002, c.9, s.18

(2) Notice of Date of Completion. Notice of the date of completion of the building or part must be given to the chief building official or the registered code agency, if any. 2002, c.9, s.18

(3) Final Certificate. If a registered code agency has been appointed for the building or part of the building by a principal authority to perform the functions described in clause 4.1(4)(b) or (c) or has been appointed under section 4.2, a final certificate that contains the prescribed information must be issued. 2002, c.9, s.18

(4) Inspection, etc. If subsection (3) does not apply,

(a) either the building or part must be inspected or 10 days must elapse after notice of the date of completion is served on the chief building official; and
(b) any order made under section 12 must be complied with. 2002, c.9, s.18

12. (1) Inspection of Building Site. An inspector may enter upon land and into buildings at any reasonable time without a warrant for the purpose of inspecting the building or site in respect of which a permit is issued or an application for a permit is made. 1992, c.23, s.12(1)

(2) Order. An inspector who finds a contravention of this Act or the building code may make an order directing compliance with this Act or the building code and may require the order to be carried out immediately or within such time as is specified in the order. 1992, c.23, s.12(2)

(3) Service. The order shall be served on the person whom the inspector believes is contravening this Act or the building code. 1992, c.23, s.12(3)

(4) Form and Contents. The prescribed form or the form approved by the Minister must be used for the order and it must contain sufficient information to specify the nature of the contravention and its location and the nature of the compliance that is required. 2002, c.9, s.19; 2006, c.21, Sched. F, s.104(6)

(5) Posting. The inspector may post a copy of the order on the site of the construction or demolition. 1992, c.23, s.12(5)

13. (1) Order Not to Cover. An inspector may make an order prohibiting the covering or enclosing of any part of a building pending inspection. 1992, c.23, s.13(1)

(1.1) Form of Order. The prescribed form or the form approved by the Minister must be used for an order made under this section. 2002, c.9, s.20(1); 2006, c.21, Sched. F, s.104(7)

(2) Service. The order shall be served on the person to whom the permit is issued, if any, and on such other persons affected thereby as the inspector determines. 1992, c.23, s.13(2)

(3) Posting. The inspector may post a copy of the order on the site of the construction. 1992, c.23, s.13(3)

(4) Inspection. An inspection shall be made within a reasonable time after the person to whom the order is made has given notice that the part of the building is ready for inspection. 1992, c.23, s.13(4)

(5) Service. Section 27 does not apply to a notice under subsection (4). 1992, c.23, s.13(5)

(6) Order to Uncover. A chief building official or registered code agency who has reason to believe that part of a building that is covered or enclosed has not been constructed in compliance with this Act or the building code may order the persons responsible for the construction to uncover the part at their own expense for the purpose of an inspection if,

- (a) the part was covered or enclosed contrary to an order made under subsection (1);
- (b) a notice required to be given to the chief building official, registered code agency or inspector before the part was covered or enclosed under a by-law, resolution or regulation made under clause 7(e) was not given, or a notice required under section 10.2 was not received;
- (c) in cases where a notice required under section 10.2 is received, the period prescribed under subsection 10.2(2) did not elapse before the part was covered or enclosed;
- (d) in cases where a notice required by a by-law, resolution or regulation made under clause 7(e) is given,
  - (i) the inspection period prescribed under clause 7(e) did not elapse before the part was covered or enclosed, or
  - (ii) if an inspection period is not prescribed under clause 7(e), a reasonable period of time after the notice was given did not elapse before the part was covered or enclosed; or
- (e) the part has been constructed without a permit being issued. 2006, c.19, Sched. O, ss.1(6)

14. (1) Stop Work Order. If an order made under section 12 or 13 is not complied with within the time specified in it, or where no time is specified, within a reasonable time, the chief building official or registered code agency, as the case may be may order that all or any part of the construction or demolition cease. 1992, c.23, s.14(1); 2002, c.9, s.21(1)

(1.1) Form of Order. The prescribed form or the form approved by the Minister must be used for the order. 2002, c.9, s.21(2); 2006, c.21, Sched. F, s.104(8)

(2) Service. The order shall be served on such persons affected thereby as the chief building official or registered code agency determines and a copy shall be posted on the site of the construction or demolition. 1992, c.23, s.14(2); 2002, c.9, s.21(3)

(3) Timing. The order is effective from the time it is posted under subsection (2). 1992, c.23, s.14(3)

(4) Effect of Order. If an order to cease construction or demolition is made, no person shall perform any act in the construction or demolition of the building in respect of which the order is made other than work necessary to carry out the order made under section 12 or 13. 1992, c.23, s.14(4)

(5) Referral to Chief Building Official. When a registered code agency makes an order under this section, the agency shall refer the matter to the chief building official as soon as practicable. 2002, c.9, s.21(4)

(6) Same. The referral must be made in the prescribed manner. 2002, c.9, s.21(4)

(7) Effect of Referral. After making the referral, the registered code agency shall take no further steps in respect of the matter to which the order refers and the principal authority that issued the permit is responsible for the enforcement of this Act in respect of the matter. 2002, c.9, s.21(4)

(8) Powers of Chief Building Official. The chief building official may amend or rescind any order made by the registered code agency in respect of the matter. 2002, c.9, s.21(4)

Property Standards

15. Repealed. 2002, c.9, s.22

15.1 (1) Municipal Property Standards. In sections 15.1 to 15.8 inclusive,

"committee" means a property standards committee established under section 15.6; ("comité")

"occupant" means any person or persons over the age of 18 years in possession of the property; ("occupant") "owner" includes,

(a) the person for the time being managing or receiving the rent of the land or premises in connection with which the word is used, whether on the person's own account or as agent or trustee of any other person, or who would so receive the rent if such land and premises were let, and

(b) a lessee or occupant of the property who, under the terms of a lease, is required to repair and maintain the property in accordance with the standards for the maintenance and occupancy of property; ("propriétaire")

"property" means a building or structure or part of a building or structure, and includes the lands and premises appurtenant thereto and all mobile homes, mobile buildings, mobile structures, outbuildings, fences and erections thereon whether heretofore or hereafter erected, and includes vacant property; ("bien")

"repair" includes the provision of facilities, the making of additions or alterations or the taking of any other action that may be required to ensure that a property conforms with the standards established in a by-law passed under this section. ("réparation") 1997, c.24, s.224(8)

(2) Adoption of Policy. Where there is no official plan in effect in a municipality, the council of the municipality may, by by-law approved by the Minister, adopt a policy statement containing provisions relating to property conditions. 1997, c.24, s.224(8)

(3) Standards for Maintenance and Occupancy. The council of a municipality may pass a by-law to do the following things if an official plan that includes provisions relating to property conditions is in effect in the municipality or if the council of the municipality has adopted a policy statement as mentioned in subsection (2);

1. Prescribing standards for the maintenance and occupancy of property within the municipality or within any defined area or areas and for prohibiting the occupancy or use of such property that does not conform with the standards.
2. Requiring property that does not conform with the standards to be repaired and maintained to conform with the standards or the site to be cleared of all buildings, structures, debris or refuse and left in graded and levelled condition. 1997, c.24, s.224(8)

(4) No Distinction on the Basis of Relationship. The authority to pass a by-law under subsection (3) does not include the authority to pass a by-law that sets out requirements, standards or prohibitions that have the effect of distinguishing between persons who are related and persons who are unrelated in respect of the occupancy or use of a property, including the occupancy or use as a single housekeeping unit. 1997, c.24, s.224(8)

(5) Provision of No Effect. A provision in a by-law is of no effect to the extent that it contravenes the restrictions described in subsection (4). 1997, c.24, s.224(8)

15.2 (1) Inspection of Property Without Warrant. Where a by-law under section 15.1 is in effect, an officer may, upon producing proper identification, enter upon any property at any reasonable time without a warrant for the purpose of inspecting the property to determine,

(a) whether the property conforms with the standards prescribed in the by-law; or

(b) whether an order made under subsection (2) has been complied with. 1997, c.24, s.224(8)

(2) Contents of Order. An officer who finds that a property does not conform with any of the standards prescribed in a by-law passed under section 15.1 may make an order,

(a) stating the municipal address or the legal description of such property;

(b) giving reasonable particulars of the repairs to be made or stating that the site is to be cleared of all buildings, structures, debris or refuse and left in a graded and levelled condition;

(c) indicating the time for complying with the terms and conditions of the order and giving notice that, if the repair or clearance is not carried out within that time, the municipality may carry out the repair or clearance at the owner's expense; and

(d) indicating the final date for giving notice of appeal from the order. 1997, c.24, s.224(8)

(3) Service and Posting of Order. The order shall be served on the owner of the property and such other persons affected by it as the officer determines and a copy of the order may be posted on the property. 1997, c.24, s.224(8)

(4) Registration of Order. The order may be registered in the proper land registry office and, upon such registration, any person acquiring any interest in the land subsequent to the registration of the order shall be deemed to have been served with the order on the day on which the order was served under subsection (3) and, when the requirements of the order have been satisfied, the clerk of the municipality shall forthwith register in the proper land registry office a certificate that such requirements have been satisfied, which shall operate as a discharge of the order. 1997, c.24, s.224(8)

15.3 (1) Appeal of Order. An owner or occupant who has been served with an order made under subsection 15.2(2) and who is not satisfied with the terms or conditions of the order may appeal to the committee by sending a notice of appeal by registered mail to the secretary of the committee within 14 days after being served with the order. 1997, c.24, s.224(8)

(2) Confirmation of Order. An order that is not appealed within the time referred to in subsection (1) shall be deemed to be confirmed. 1997, c.24, s.224(8)

(3) Duty of Committee. The committee shall hear the appeal. 2002, c.9, s.24

(3.1) Powers of Committee. On an appeal, the committee has all the powers and functions of the officer who made the order and the committee may do any of the following things if, in the committee's opinion, doing so would maintain the general intent and purpose of the by-law and of the official plan or policy statement:

1. Confirm, modify or rescind the order to demolish or repair.
2. Extend the time for complying with the order. 2002, c.9, s.24

(4) Appeal to Court. The municipality in which the property is situate or any owner or occupant or person affected by a decision under subsection (3.1) may appeal to the Superior Court of Justice by notifying the clerk of the municipality in writing and by applying to the court within 14 days after a copy of the decision is sent. 2002, c.9, s.24

(5) Appointment. The Superior Court of Justice shall appoint, in writing, a time and place for the hearing of the appeal and may direct in the appointment the manner in which and the persons upon whom the appointment is to be served. 2002, c.9, s.24

(6) Judge's Powers. On the appeal, the judge has the same powers and functions as the committee. 1997, c.24, s.224(8)

(7) Effect of Decisions. An order that is deemed to be confirmed under subsection (2) or that is confirmed or modified by the committee under subsection (3) or a judge under subsection (6), as the case may be, shall be final and binding upon the owner and occupant who shall carry out the repair or demolition within the time and in the manner specified in the order. 1997, c.24, s.224(8)

15.4 (1) Power of Municipality if Order not Complied with. If an order of an officer under subsection 15.2(2) is not complied with in accordance with the order as deemed confirmed or as confirmed or modified by the committee or a judge, the municipality may cause the property to be repaired or demolished accordingly. 1997, c.24, s.224(8)

(2) Warrantless Entry. For the purpose of subsection (1), employees or agents of the municipality may enter the property at any reasonable time without a warrant in order to repair or demolish the property. 1997, c.24, s.224(8)

(3) No Liability. Despite subsection 31(2), a municipal corporation or a person acting on its behalf is not liable to compensate the owner, occupant or any other person by reason of anything done by or on behalf of the municipality in the reasonable exercise of its powers under subsection (1). 1997, c.24, s.224(8)

(4) Lien. The municipality shall have a lien on the land for the amount spent on the repair or demolition under subsection (1) and the amount shall have priority lien status as described in section 1 of the *Municipal Act, 2001* or section 3 of the *City of Toronto Act, 2006*, as the case may be. 2002, c.17, Sched. F, Table; 2006, c.32, Sched. C, s.3(2)

15.5 (1) Certificate of Compliance. An officer who, after inspecting a property, is of the opinion that the property is in compliance with the standards established in a by-law passed under section 15.1 may issue a certificate of compliance to the owner. 1997, c.24, s.224(8)

(2) Request for Certificate. An officer shall issue a certificate to an owner who requests one and who pays the fee set by the council of the municipality in which the property is located. 1997, c.24, s.224(8)

(3) Fee for Certificate. A council of a municipality may set a fee for the issuance of a certificate. 1997, c.24, s.224(8)

15.6 (1) Property Standards Committee. A by-law passed under section 15.1 shall provide for the establishment of a committee composed of such persons, not fewer than three, as the council considers advisable to hold office for such term and on such conditions as the by-law may establish. 1997, c.24, s.224(8)

(2) Filling of Vacancies. The council of the municipality shall forthwith fill any vacancy that occurs in the membership of the committee. 1997, c.24, s.224(8)

(3) Compensation. The members of the committee shall be paid such compensation as the council may provide. 1997, c.24, s.224(8)

(4) Chair. The members shall elect a chair from among themselves; when the chair is absent through illness or otherwise, the committee may appoint another member as acting chair. 1997, c.24, s.224(8)

(5) Quorum. A majority of the members constitutes a quorum for transacting the committee's business. 1997, c.24, s.224(8)

(6) Secretary. The members shall provide for a secretary for the committee. 1997, c.24, s.224(8)

(7) Duty of Secretary. The secretary shall keep on file the records of all official business of the committee, including records of all applications and minutes of all decisions respecting those applications, and section 253 of the *Municipal Act, 2001* or section 199 of the *City of Toronto Act, 2006*, as the case may be, applies with necessary modifications to the minutes and records. 2002, c.17, Sched. F, Table; 2006, c.32, Sched. C, s.3(3)

(8) Rules of Procedure and Oaths. The committee may, subject to subsection (9), adopt its own rules of procedure and any member may administer oaths. 1997, c.24, s.224(8)

(9) Where Committee Required to Give Notice. The committee shall give notice or direct that notice be given of the hearing of an appeal to such person as the committee considers advisable. 1997, c.24, s.224(8)

15.7 (1) Emergency Order re Dangerous Non-Conformity with Standards. If upon inspection of a property the officer is satisfied that there is non-conformity with the standards in a by-law passed under section 15.1 to such extent as to pose an immediate danger to the health or safety of any person, the officer may make an order containing particulars of the non-conformity and requiring remedial repairs or other work to be carried out immediately to terminate the danger. 1997, c.24, s.224(8)

(2) Service. The order shall be served on the owner of the property and such other persons affected thereby as the officer determines and a copy shall be posted on the property. 1997, c.24, s.224(8)

(3) Emergency Powers. After making an order under subsection (1), the officer may, either before or after the order is served, take any measures necessary to terminate the danger and, for this purpose, the municipally may, through its employees and agents, at any time enter the property in respect of which the order was made without a warrant. 1997, c.24, s.224(8)

(4) No Liability. Despite subsection 31(2), a municipal corporation or a person acting on its behalf is not liable to compensate the owner, occupant or any other person by reason of anything done by or on behalf of the municipality in the reasonable exercise of its powers under subsection (3). 1997, c.24, s.224(8)

(5) Service. If the order was not served before measures were taken to terminate the danger, the officer shall serve copies of the order in accordance with subsection (2) as soon as practicable after the measures have been taken, and each copy of the order shall have attached to it a statement by the officer describing the measures taken by the municipality and providing details of the amount expended in taking the measures. 1997, c.24, s.224(8)

(6) Service of Statement. If the order was served before the measures were taken, the officer shall serve a copy of the statement mentioned in subsection (5) in accordance with subsection (2) as soon as practicable after the measures have been taken. 1997, c.24, s.224(8)

(7) Application to Court. As soon as practicable after the requirements of subsections (5) and (6) have been complied with, the officer shall apply to a judge of the Superior Court of Justice for an order confirming the order made under subsection (1) and the judge shall hold a hearing for that purpose. 1997, c.24, s.224(8); 2002, c.9, s.25

(8) Powers of Judge. The judge in disposing of an application under subsection (7) shall,

(a) confirm, modify or rescind the order; and

(b) determine whether the amount spent on measures to terminate the danger may be recovered in whole, in part or not at all. 1997, c.24, s.224(8)

(9) Order Final. The disposition under subsection (8) is final. 1997, c.24, s.224(8)

(10) Lien. The amount determined by the judge to be recoverable shall be a lien on the land and shall have priority lien status as described in section 1 of the *Municipal Act, 2001* or section 3 of the *City of Toronto Act, 2006*, as the case may be. 2002, c.17, Sched. F, Table; 2006, c.32, Sched. C, s.3(4)

15.8 (1) Inspection Powers of Officer. For the purposes of an inspection under Section 15.2, an officer may,

(a) require the production for inspection of documents or things, including drawings or specifications, that may be relevant to the property or any part thereof;

(b) inspect and remove documents or things relevant to the property or part thereof for the purpose of making copies or extracts;

(c) require information from any person concerning a matter related to a property or part thereof;

(d) be accompanied by a person who has special or expert knowledge in relation to a property or part thereof;

(e) alone or in conjunction with a person possessing special or expert knowledge, make examinations or take tests, samples or photographs necessary for the purposes of the inspection; and

(f) order the owner of the property to take and supply at the owner's expense such tests and samples as are specified in the order. 1997, c.24, s.224(8)

(2) Samples. The officer shall divide the sample taken under clause (1)(e) into two parts and deliver one part to the person from whom the sample is taken, if the person so requests at the time the sample is taken and provides the necessary facilities. 1997, c.24, s.224(8)

(3) Same. If an officer takes a sample under clause (1)(e) and has not divided the sample into two parts, a copy of any report on the sample shall be given to the person from whom the sample was taken. 1997, c.24, s.224(8)

(4) Receipt. An officer shall provide a receipt for any document or thing removed under clause (1)(b) and shall promptly return them after the copies or extracts are made. 1997, c.24, s.224(8)

(5) Evidence. Copies of or extracts from documents and things removed under this section and certified as being true copies of or extracts from the originals by the person who made them are admissible in evidence to the same extent as and have the same evidentiary value as the originals. 1997, c.24, s.224(8)

Unsafe Buildings

15.9 (1) Inspection of Unsafe Buildings. An inspector may enter upon land and into buildings at any reasonable time without a warrant for the purpose of inspecting a building to determine,

(a) whether the building is unsafe; or

(b) whether an order made under subsection (4) has been complied with. 2002, c.9, s.26

(2) Interpretation. A building is unsafe if the building is,

(a) structurally inadequate or faulty for the purpose for which it is used; or

(b) in a condition that could be hazardous to the health or safety of persons in the normal use of the building, persons outside the building or persons whose access to the building has not been reasonably prevented. 2002, c.9, s.26

(3) Sewage Systems. In addition to the criteria set out in subsection (2), a sewage system is unsafe if it is not maintained or operated in accordance with this Act and the building code. 2002, c.9, s.26

(4) Order. An inspector who finds that a building is unsafe may make an order setting out the reasons why the building is unsafe and the remedial steps necessary to render the building safe and may require the order to be carried out within the time specified in the order. 2002, c.9, s.26

(5) Service. The order shall be served on the owner and each person apparently in possession of the building and such other persons affected thereby as the chief building official determines and a copy of the order may be posted on the site of the building. 2002, c.9, s.26

(6) Order Respecting Occupancy. If an order of an inspector under subsection (4) is not complied with within the time specified in it, or where no time is specified, within a reasonable time, the chief building official,

(a) may by order prohibit the use or occupancy of the building; and
(b) may cause the building to be renovated, repaired or demolished to remove the unsafe condition or take such other action as he or she considers necessary for the protection of the public. 2002, c.9, s.26

(7) Power of Entry. For the purpose of clause (6)(b), the chief building official, an inspector and their agents may enter upon land and into buildings at any reasonable time without a warrant. 2002, c.9, s.26

(8) Service. The order under clause (6)(a) shall be served on the owner and each person apparently in possession of the building and such other persons affected thereby as the chief building official determines and a copy of the order shall be posted on the site of the building. 2002, c.9, s.26

(9) Timing. The order under clause (6)(a) is effective from the time it is posted. 2002, c.9, s.26

(10) Lien. If the building is in a municipality, the municipality shall have a lien on the land for the amount spent on the renovation, repair, demolition or other action under clause (6)(b) and the amount shall have priority lien status as described in section 1 of the *Municipal Act, 2001* or section 3 of the *City of Toronto Act, 2006*, as the case may be. 2002, c.17, Sched. C, s.4(1); 2006, c.32, Sched. C, s.3(5)

(11) Deemed Taxes. If the building is in territory without municipal organization, the amount spent on the renovation, repair, demolition or other action under clause (6)(b) shall be deemed to be taxes imposed under section 3 of the *Provincial Land Tax Act* for the purposes of sections 26 and 27 of that Act. 2002, c.9, s.26

15.10 (1) Emergency Order where Immediate Danger. If upon inspection of a building an inspector is satisfied that the building poses an immediate danger to the health or safety of any person, the chief building official may make an order containing particulars of the dangerous conditions and requiring remedial repairs or other work to be carried out immediately to terminate the danger. 2002, c.9, s.26

(2) Service. The order shall be served on the owner and each person apparently in possession of the building and such other persons affected thereby as the chief building official determines and a copy shall be posted on the site of the building. 2002, c.9, s.26

(3) Emergency Powers. After making an order under subsection (1), the chief building official may, either before or after the order is served, take any measures necessary to terminate the danger and, for this purpose, the chief building official, an inspector and their agents may at any time enter upon the land and into the building in respect of which the order was made without a warrant. 2002, c.9, s.26

(4) No Liability. Despite subsection 31(2), the Crown, a municipality, an upper-tier municipality, a board of health, a planning board or a conservation authority or a person acting on behalf of any of them is not liable to compensate the owner, occupant or any other person by reason of anything done by or on behalf of the chief building official or an inspector in the reasonable exercise of his or her powers under subsection (3). 2002, c.9, s.26; 2002, c.17, Sched. C, s.5(1)

(5) Service. If the order was not served before measures were taken to terminate the danger, the chief building official shall serve copies of the order in accordance with subsection (2) as soon as practicable after the measures have been taken and each copy of the order shall have attached to it a statement by the chief building official describing the measures taken and providing details of the amount spent in taking the measures. 2002, c.9, s.26

(6) Service of Statement. If the order was served before the measures were taken, the chief building official shall serve a copy of the statement mentioned in subsection (5) in accordance with subsection (2) as soon as practicable after the measures have been taken. 2002, c.9, s.26

(7) Application to Court. As soon as practicable after subsections (5) and (6) have been complied with, the chief building official shall apply to the Superior Court of Justice for an order confirming the order made under subsection (1) and the court shall hold a hearing for that purpose. 2002, c.9, s.26

(8) Powers of Court. In disposing of an application under subsection (7), the court shall,

(a) confirm, modify or rescind the order; and

(b) determine whether the amount spent on measures to terminate the danger may be recovered in whole, in part or not at all. 2002, c.9, s.26

(9) Order Final. The disposition under subsection (8) is final. 2002, c.9, s.26

(10) Lien. If the building is in a municipality, the amount determined by the judge to be recoverable shall be a lien on the land and shall have priority lien status as described in section 1 of the *Municipal Act, 2001* or section 3 of the *City of Toronto Act, 2006*, as the case may be. 2002, c.17, Sched. C, s.5(2); 2006, c.32, Sched. C, s.3(6)

(11) Deemed Taxes. If the building is in territory without municipal organization, the amount determined by the judge to be recoverable shall be deemed to be taxes imposed under section 3 of the *Provincial Land Tax Act* for the purposes of sections 26 and 27 of that Act. 2002, c.9, s.26

Maintenance Inspection Programs

15.10.1 (1) Maintenance Inspections. An inspector may enter upon land and into buildings at any reasonable time without a warrant for the purpose of conducting a maintenance inspection. 2006, c. 22, s. 112 (8).

(2) Order. An inspector who finds a contravention of this Act or the building code may make an order directing compliance with this Act or the building code and may require the order to be carried out immediately or within such time as is specified in the order. 2006, c.22, s.112(8).

(3) Service. The order shall be served on the person whom the inspector believes is contravening this Act or the building code. 2006, c.22, s.112(8).

(4) Form and Contents. The prescribed form or the form approved by the Minister must be used for the order and it must contain sufficient information to specify the nature of the contravention and its location and the nature of the compliance that is required. 2006, c.22, s.112(8).

(5) Posting. The inspector may post a copy of the order on the site of the maintenance inspection. 2006, c.22, s.112(8).

Qualifications

15.11 (1) Qualifications for Various Positions. A person is not eligible to be appointed as a chief building official unless he or she has the qualifications set out in the building code for the position. 2002, c.9, s.27

(2) Same. Subsection (1) also applies to every inspector who has the same powers and duties as a chief building official in relation to sewage systems or to plumbing, to the extent of those powers and duties. 2002, c.9, s.27

(3) Qualifications for Inspectors. A person is not eligible to be appointed as an inspector under this Act unless he or she has the qualifications set out in the building code for the position. 2002, c.9, s.27

(4) Qualifications for Registered Code Agencies. A person is not eligible to be appointed as a registered code agency under this Act unless the person has the qualifications and meets the requirements set out in the building code. 2002, c.9, s.27; 2006, c.19, Sched. O, s.1(7)

(5) Qualifications for Designers. A person is not eligible to engage in any of the following activities unless he, she or it has the qualifications and meets the requirements set out in the building code to be a designer:

1. Prepare a design or give other information or opinion concerning whether a building or part of a building complies with the building code, if the design, information or opinion is to be submitted to a chief building official in connection with,
    - i. an application for a permit,
    - ii. a request for the authorization referred to in subsection 8(12) or (13), or
    - iii. a report described in paragraph 2.
2. If a general review of the construction of a building or part of a building is required by the building code, prepare a written report based on the general review. 2002, c.9, s.27; 2006, c.19, Sched. O, s.1(7)

(6) Same. In subsection (5),

"design" includes a plan, specification, sketch, drawing or graphic representation respecting the construction of a building. 2002, c.9, s.27

(7) Prohibition. No person shall represent, directly or indirectly, that he, she or it has the qualifications or meets the requirements established under this section if the person does not have those qualifications or does not meet those requirements. 2002, c.9, s.27; 2006, c.19, Sched. O, s.1(7)

15.12 (1) Qualifications re Sewage Systems. No person shall engage in the business of constructing on site, installing, repairing, servicing, cleaning or emptying sewage systems unless the person has the qualifications and meets the requirements set out in the building code. 2002, c.9, s.27; 2006, c.19, Sched. O, s.1(8)

(2) Prohibition. No person shall represent, directly or indirectly, that he, she or it has the qualifications or meets the requirements referred to in subsection (1) if the person does not have those qualifications or does not meet those requirements. 2002, c.9, s.27; 2006, c.19, Sched. O, s.1(8)

(3) Duty to Notify the Chief Building Official. If any part of the construction of a building will be undertaken by a person described in subsection (1) (a "specified person"), no person shall begin or continue the construction of a sewage system, or cause it to begin or continue, unless the person has given the chief building official the prescribed information about the specified person. 2002, c.9, s.27; 2006, c.19, Sched. O, s.1(8)

15.13 (1) Duty to have Insurance. Every registered code agency, every person referred to in subsection 15.11(5) and such other persons as may be specified in the building code who construct buildings are required to have the insurance coverage specified by the building code. 2002, c.9, s.27; 2006, c.19, Sched. O, s.1(9)

(2) Exception. Subsection (1) does not apply to a person who is a builder or vendor within the meaning of the *Ontario New Home Warranties Plan Act* in respect of the construction of a building. 2002, c.9, s.27; 2006, c.19, Sched. O, s.1(10)

(3) Prohibition. No person shall represent, directly or indirectly, that he, she or it has the insurance coverage required by subsection (1) if the person does not have that insurance coverage. 2002, c.9, s.27; 2006, c.19, Sched. O, s.1(10)

(4) Qualification or Requirement. If the building code so provides, the insurance coverage constitutes a qualification or requirement for the purposes of a position referred to in section 15.11. 2002, c.9, s.27

(5) Duty to Notify the Chief Building Official. If any part of the construction of a building will be undertaken by a person who is required by subsection (1) to have insurance (a "specified person"), no person shall begin or continue the construction, or cause it to begin or continue, unless the person has given the chief building official the prescribed information about the specified person and the insurance coverage of the specified person. 2002, c.9, s.27; 2006, c.19, Sched. O, s.1(10)

Powers and Duties of Registered Code Agencies

15.14 (1) Notice to Chief Building Official. Every registered code agency shall give the chief building official such information as may be prescribed by regulation. 2002, c.9, s.28

(2) Notice to the Director. Every registered code agency shall give the director such information as may be prescribed by regulation. 2002, c.9, s.28

15.15 Functions of Registered Code Agencies. The following are the functions that a registered code agency may be appointed to perform in respect of the construction of a building:

1. Review designs and other materials to determine whether the proposed construction of a building complies with the building code.
2. Issue plans review certificates.
3. Issue change certificates.
4. Inspect the construction of a building for which a permit has been issued under this Act.
5. Issue final certificates.
6. Perform such other functions as may be authorized under this Act or in the building code. 2002, c.9, s.28

15.16 (1) Scope of Agency's Powers. A registered code agency may exercise the powers and perform the duties specified in this Act and the building code in respect only of the functions and the building specified in a particular appointment. 2002, c.9, s.28

(2) Confidentiality. A registered code agency shall not collect, use or disclose information except in accordance with the building code. 2002, c.9, s.28

15.17 (1) Persons Acting on Behalf of an Agency. A registered code agency may authorize, in writing, one or more prescribed persons to exercise powers and perform its functions under this Act, subject to such conditions as may be prescribed by regulation. 2002, c.9, s.28

(2) Certificate of Authorization. The registered code agency shall issue a certificate of authorization containing the prescribed information to the authorized person. 2002, c.9, s.28

(3) Powers and Duties of Inspector. The authorized person may exercise the powers and perform the duties of an inspector under any of the following provisions, in respect of the construction of a building for which the agency is appointed under this Act:

1. Section 12 (inspection).
2. Section 13 (order not to cover).
3. Section 16 (entry to dwellings).
4. Section 18 (powers of inspector). 2002, c.9, s.28

15.18 (1) Duties re Certificates and Orders. When a registered code agency makes an order under this Act, the agency shall give a copy of the order within the period prescribed by regulation to the chief building official. 2002, c.9, s.28

(2) Certificates. A registered code agency shall issue such certificates and use such forms as may be required by the building code and shall include in them or provide such information as may be prescribed. 2002, c.9, s.28

(3) Same. A certificate issued under this Act by a registered code agency must be in the prescribed form or the form approved by the Minister. 2002, c.9, s.28; 2006, c.21, Sched. F, s.104(9)

15.19 (1) Expiry of an Agency's Appointment. The appointment of a registered code agency expires when the agency has performed the functions for which it was appointed in respect of construction of the specified building. 2002, c.9, s.28

(2) Same, by Virtue of Circumstances. The appointment of a registered code agency that has not performed all of the functions for which it is appointed in respect of the construction expires if either of the following events occurs:

1. The chief building official refuses to issue a permit for construction of the specified building.
2. The permit for construction of the building is revoked. 2002, c.9, s.28

15.20 (1) Termination of an Agency's Appointment. The appointment of a registered code agency shall not be terminated except in accordance with this section and the building code. 2002, c.9, s.28

(2) Same. The building code may specify that the consent of the director to the termination of an appointment is required. 2002, c.9, s.28

(3) Effect of Termination, Appointment by Principal Authority. If the registered code agency was appointed by a principal authority, upon the termination of the appointment the principal authority becomes responsible to ensure that the remaining functions of the agency are performed by the principal authority or another registered code agency. 2002, c.9, s.28

(4) Same, Appointment by Applicant. If the registered code agency was appointed under section 4.2, upon the termination of the appointment the person who made the appointment becomes responsible to ensure that the remaining functions of the agency are performed by another registered code agency or, with the prior written agreement of the principal authority, by the principal authority or to ensure that work on the construction is halted. 2002, c.9, s.28

(5) Powers of the Director. When the appointment of a registered code agency is terminated, the director may give directions to anyone described in subsection (6) in order to facilitate the transfer of the agency's functions. 2002, c.9, s.28

(6) Same. Directions may be given to the person who made the appointment that has been terminated, to the registered code agency whose appointment has been terminated and to a transferee registered code agency. 2002, c.9, s.28

(7) Duties. The person to whom directions are given shall comply with them. 2002, c.9, s.28

15.21 (1) Order to Suspend Construction. The chief building official may, by order, suspend all or part of the construction of the building to which the appointment of a registered code agency relates,

(a) if the chief building official has reason to believe that the registered code agency has ceased to perform the functions specified in the appointment; and

(b) if the appointment of the registered code agency has not expired or been terminated. 2002, c.9, s.28

(2) Same. If the appointment of a registered code agency under section 4.2 is terminated, the chief building official shall, by order, suspend the construction of the applicable building until,

(a) another registered code agency is appointed to perform the remaining functions of the original registered code agency; or

(b) the principal authority agrees, in writing, to perform the remaining functions of the original registered code agency. 2002, c.9, s.28

(3) Delegation. A principal authority may delegate to the chief building official the power to agree to perform the remaining functions of a registered code agency appointed under section 4.2 whose appointment is terminated and may impose conditions and restrictions on the delegation. 2002, c.9, s.28

(4) Effect of Order. If an order is issued under this section, no person shall perform any act in the construction of the building in respect of which the order is made, other than work necessary to secure the safety and security of the building and of the construction site. 2002, c.9, s.28

(5) Procedural Matters. Subsections 14(2) and (3) apply with respect to an order under this section. 2002, c.9, s.28

15.22 Conflict Between Appointment and Act, etc. This Act and the building code prevail over the terms of an appointment of a registered code agency. 2002, c.9, s.28

General Powers of Inspection and Enforcement

15.23 Duty to Carry Identification. The chief building official, inspectors and persons authorized by a registered code agency to exercise powers and perform functions on its behalf shall carry their certificate of appointment or authorization, as the case may be, when performing their duties and shall produce them for inspection upon request. 2002, c.9, s.29

16. (1) Entry to Dwellings. Despite sections 8, 12, 15, 15.2, 15.4, 15.9 and 15.10.1, an inspector or officer shall not enter or remain in any room or place actually being used as a dwelling unless,

(a) the consent of the occupier is obtained, the occupier first having been informed that the right of entry may be refused and entry made only under the authority of a warrant issued under this Act;

(a.1) a warrant issued under this Act is obtained;

(b) the delay necessary to obtain a warrant or the consent of the occupier would result in an immediate danger to the health or safety of any person;

(c) the entry is necessary to terminate a danger under subsection 15.7(3) or 15.10(3); or

(d) the requirements of subsection (2) are met and the entry is necessary to remove a building or restore a site under subsection 8(6), to remove an unsafe condition under clause 15.9(6)(b) or to repair or demolish under subsection 15.4(1). 1992, c.23, s.16(1); 1997, c.24, s.224(9, 10); 2002, c.9, s.30; 2006, c.19, Sched. O, s.1(11); 2006 c.22, s.112(9)

(2) Notice. Within a reasonable time before entering the room or place for a purpose described in clause (1)(d), the inspector or officer shall serve the occupier with notice of his or her intention to enter it. 1992, c.23, s.16(2); 1997, c.24, s.224(11)

17. Repealed. 2002, c.9, s.31(2)

17.1 (1) Recovery of Expenditures for Repairs, etc. This section applies if money is spent by a board of health, planning board or conservation authority or, in the circumstances described in subsection (2), by the Crown or an upper-tier municipality or, in the circumstances described in subsection (4), by a municipality,

(a) to carry out a removal and restoration under subsection 8(6);

(b) to carry out a renovation, repair, demolition or other action under clause 15.9(6)(b); or

(c) to perform remedial or other work under subsection 15.10(1) where the amount spent is determined to be recoverable by a judge under subsection 15.10(8). 1999, c.12, Sched. M, s.8; 2002, c.9, s.32(1); 2002, c.17, Sched. F, Table

(2) In Municipalities. If the building in respect of which money was spent is in a municipality,

(a) the upper-tier municipality, board of health, planning board, conservation authority or the Crown may instruct the municipality to recover the amount spent;
(b) subsection 8(7), 15.9(10) or 15.10(10), as the case may be, applies to the collection of the amount; and
(c) the money collected, less the costs reasonably attributable to the collection, shall be paid by the municipality to the upper-tier municipality, board of health, planning board, conservation authority or the Crown. 1999, c.12, Sched. M, s.8; 2002, c.9, s.32(2); 2002, c.17, Sched. F, Table

(3) Not Interest of the Crown. Where the Crown instructs the municipality under clause (2)(a) to recover the amount spent, the lien referred to in subsection 8(7), 15.9(10) or 15.10(10) is not an estate or interest of the Crown within the meaning of clause 379(7)(b) of the *Municipal Act, 2001* or clause 350(7)(b) of the *City of Toronto Act, 2006*, as the case may be. 1999, c.12, Sched. M, s.8; 2002, c.9, s.32(3); 2002, c.17, Sched. F, Table; 2006, c.32, Sched. C, s.3(7)

(4) In Territory without Municipal Organization. If the building in respect of which money was spent is in territory without municipal organization,

(a) the municipality, board of health, planning board or conservation authority may instruct the land tax collector appointed under the *Provincial Land Tax Act* to recover the amount spent;
(b) subsection 8(8), 15.9(11) or 15.10(11), as the case may be, applies to the collection of the amount; and
(c) the money collected, less the costs reasonably attributable to the collection, shall be paid by the Crown to the municipality, board of health, planning board or conservation authority. 1999, c.12, Sched. M, s.8; 2002, c.9, s.32(4)

18. (1) Powers of Inspector. For the purposes of an inspection under this Act, an inspector may,

(a) require the production for inspection of documents or things, including drawings or specifications, that may be relevant to the building or any part thereof;

(b) inspect and remove documents or things relevant to the building or part thereof for the purpose of making copies or extracts;

(c) require information from any person concerning a matter related to a building or part thereof;

(d) be accompanied by a person who has special or expert knowledge in relation to a building or part thereof;

(e) alone or in conjunction with a person possessing special or expert knowledge, make examinations or take tests, samples or photographs necessary for the purposes of the inspection; and

(f) order any person to take and supply at that person's expense such tests and samples as are specified in the order. 1992, c.23, s.18(1); 1997, c.30, Sched. B, s.11

(2) Samples. The inspector shall divide the sample taken under clause (1)(e) into two parts and deliver one part to the person from whom the sample is taken, if the person so requests at the time the sample is taken and provides the necessary facilities. 1992, c.23, s.18(2)

(3) Idem. If an inspector takes a sample under clause (1)(e) and has not divided the sample into two parts, a copy of any report on the sample shall be given to the person from whom the sample was taken. 1992, c.23, s.18(3)

(4) Receipt. An inspector shall provide a receipt for any document or thing removed under clause (1)(b) and shall promptly return them after the copies or extracts are made. 1992, c.23, s.18(4)

(5) Evidence. Copies of or extracts from documents and things removed under this section and certified as being true copies of or extracts from the originals by the person who made them are admissible in evidence to the same extent as and have the same evidentiary value as the originals. 1992, c.23, s.18(5)

(6) Form of Order. The prescribed form or the form approved by the Minister must be used for an order under subsection (1). 2002, c.9, s.33; 2006, c.21, Sched. F, s.104(10)

18.1 Repealed. 2002, c.9, s.34

19. (1) Obstruction of Inspector, etc. No person shall hinder or obstruct, or attempt to hinder or obstruct, a chief building official, inspector, officer or a person authorised by a registered code agency in the exercise of a power or the performance of a duty under this Act. 1997, c.24, s.224(13); 2002, c.9, s.35(1)

(2) Occupied Dwellings. A refusal of consent to enter or remain in a place actually used as a dwelling is not hindering or obstructing within the meaning of subsection (1) unless the inspector, officer or a person authorised by a registered code agency is acting under a warrant issued under this Act or the circumstances described in clauses 16(1)(b), (c) or (d). 1997, c.24, s.224(13); 2002, c.9, s.35(2)

(3) Assistance. Every person shall assist any entry, inspection, examination, testing or inquiry by an inspector, chief building official, officer or a person authorised by a registered code agency in the exercise of a power or performance of a duty under this Act. 1997, c.24, s.224(13); 2002, c.9, s.35(3)

(4) Same. No person shall neglect or refuse,

(a) to produce any documents, drawings, specifications or things required by an officer under clause 15.8(1)(a) or (e) or under clause 18(1)(a) or (e) by an inspector or a person authorised by a registered code agency; or

(b) to provide any information required by an officer under clause 15.8(1)(c) or under clause 18(1)(c) by an inspector or a person authorised by a registered code agency. 2002, c.9, s.35(4)

20. Obstruction or Removal of Order. No person shall obstruct the visibility of an order and no person shall remove a copy of any order posted under this Act unless authorized to do so by an inspector, officer or registered code agency. 1997, c.24, s.224(14); 2002, c.9, s.36

21. (1) Warrant for Entry and Search. A provincial judge or justice of the peace may at any time issue a warrant in the prescribed form authorizing a person named in the warrant to enter and search a building, receptacle or place if the provincial judge or justice of the peace is satisfied by information on oath that there is reasonable ground to believe that,

(a) an offence under this Act has been committed; and

(b) the entry into and search of the building, receptacle or place will afford evidence relevant to the commission of the offence. 1992, c.23, s.21(1)

(2) Seizure. In a search warrant, the provincial judge or justice of the peace may authorize the person named in the warrant to seize anything that there is reasonable ground to believe will afford evidence relevant to the commission of the offence. 1992, c.23, s.21(2)

(3) Same. Anyone who seizes something under a search warrant shall,

(a) give a receipt for the thing seized to the person from whom it was seized; and

(b) bring the thing seized before the provincial judge or justice of the peace issuing the warrant or another provincial judge or justice to be dealt with according to law. 1992, c.23, s.21(3)

(4) Expiry of Warrant. A search warrant shall state the date on which it expires, which date shall be not later than fifteen days after the warrant is issued. 1992, c.23, s.21(4)

(5) Time for Execution. A search warrant may be executed only between 6 a.m. and 9 p.m. unless it provides otherwise. 1992, c.23, s.21(5)

(6) Application. Sections 159 and 160 of the *Provincial Offences Act* apply with necessary modifications in respect of any thing seized under this section. 1992, c.23, s.21(6)

Dispute Resolution, Reviews and Appeals

22. (1) Review of Inspector's Order. The chief building official may review and amend or rescind an order made by an inspector. 1992, c.23, s.22(1)

(2) Powers. A chief building official may exercise any of the powers or perform any of the duties of an inspector. 1992, c.23, s.22(2)

23. (1) Building Code Commission. The Building Code Commission is continued under the name Building Code Commission in English and Commission du code du bâtiment in French and shall be composed of those persons appointed by the Lieutenant Governor in Council. 1992, c.23, s.23(1)

(2) Chair. The Lieutenant Governor in Council may designate one of the members as chair and one or more of the members as vice-chair. 1992, c.23, s.23(2)

(3) Eligibility. A person is not eligible to be a member of the Commission if the person is,

(a) a deputy minister of a ministry;
(b) a public servant employed under Part III of the *Public Service of Ontario Act, 2006*;
(c) an employee of a municipality; or
(d) in a prescribed relationship to a registered code agency. 2006, c.35, Sched. C, s.8 2).

(4) Remuneration. The members of the Commission shall receive such remuneration and expenses as the Lieutenant Governor in Council may determine. 1992, c.23, s.23(4)

(5) Quorum. Three members of the Commission constitute a quorum. 1992, c.23, s.23(5)

24. (1) Dispute Resolution. This section applies if there is a dispute,

(a) between an applicant for a permit, a holder of a permit or a person to whom an order is given and the chief building official, a registered code agency or an inspector concerning the sufficiency of compliance with the technical requirements of the building code;
(b) between an applicant for a permit and the chief building official concerning whether the official complied with subsection 8(2.2) or (2.3); or
(c) between a holder of a permit and the chief building official, a registered code agency or an inspector concerning whether the requirements of subsection 10.2(2) have been met. 2002, c.9, s.39

(1.1) Application for Dispute Resolution. A party to the dispute may apply to the Building Code Commission to resolve the issue. 2002, c.9, s.39

(2) Hearing. The Building Code Commission shall hold a hearing to decide the dispute and shall give the parties to the dispute notice of the hearing. 2002, c.9, s.39

(2.1) Same. A hearing to decide a dispute described in clause (1)(b) or (c) must be held within the prescribed period. 2002, c.9, s.39

(3) Powers. The Building Code Commission shall, by order, determine a dispute described in clause (1)(a) and, for that purpose, may substitute its opinion for that of the chief building official, registered code agency or inspector. 2002, c.9, s.39

(3.1) Same. The Building Code Commission shall, by order, determine a dispute described in clause (1)(b) or (c) and, for that purpose, may require the chief building official, registered code agency or inspector, as the case may be, to comply with the applicable subsection of the Act. 2002, c.9, s.39

(4) Decision Final. The decision of the Building Code Commission is final. 1992, c.23, s.24(4)

(5) Restrictions on Members. Members of the Building Code Commission holding a hearing shall not,

(a) take part before the hearing in any investigation or consideration of the subject-matter of the hearing; or

(b) communicate directly or indirectly in relation to the subject-matter of the hearing with any person unless all parties are given notice and allowed to participate. 1992, c.23, s.24(5)

(6) Independent Advice. Despite subsection (5), members of the Building Code Commission may seek independent legal or technical advice but the nature of the advice shall be made known to the parties in order that they may make submissions. 1992, c.23, s.24(6)

(7) Evidence. The findings of fact at a hearing shall be based exclusively on evidence admissible or matters that may be noticed under sections 15 and 16 of the *Statutory Powers Procedure Act*. 1992, c.23, s.24(7)

(8) Restriction. Members of the Building Code Commission shall not participate in a decision of the Commission pursuant to a hearing unless they were present throughout the hearing. 1992, c.23, s.24(8)

(9) Idem. Except with the consent of the parties, no decision of the Building Code Commission shall be given unless all members present throughout the hearing participate in the decision. 1992, c.23, s.24(9)

(10) Release of Evidence. Documents and things put in evidence at the hearing shall, upon the request of the person who produced them, be released by the Building Code Commission to that person within a reasonable time after the matter in issue has been finally determined. 1992, c.23, s.24(10).

25. (1) Appeal to Court. A person who considers themself aggrieved by an order or decision made by the chief building official, a registered code agency or an inspector under this Act (except a decision under subsection 8(3) not to issue a conditional permit) may appeal the order or decision to the Superior Court of Justice within 20 days after the order or decision is made. 2002, c.9, s.40(2)

(2) Extension of Time. A judge to whom an appeal is made may, upon such conditions as the judge considers appropriate, extend the time for making the appeal before or after the time set out in subsection (1), if the judge is satisfied that there is reasonable grounds for the appeal and for applying for the extension. 1992, c.23, s.25(2)

(3) Effect of Appeal. If an appeal is made under this section in respect of a matter in which a question is pending before the Building Code Commission, the proceeding before the Commission is terminated. 1992, c.23, s.25(3)

(4) Powers of Judge. On an appeal, a judge may affirm or rescind the order or decision and take any other action that the judge considers the chief building official, registered code agency or inspector ought to take in accordance with this Act and the regulations and, for those purposes, the judge may substitute his or her opinion for that of the official, agency or inspector. 2002, c.9, s.40(3)

(5) Reference to Commission. A judge may refer a question respecting the interpretation of the technical requirements of the building code or the sufficiency of compliance with the technical requirements of the building code to the Building Code Commission for a hearing and report to the judge. 1992, c.23, s.25(5)

(6) Procedure. The procedure on the reference shall be the same as on an application under section 24. 1992, c.23, s.25(6)

(7) Stay of Order or Decision. An appeal under subsection (1) does not stay the operation of the order or decision appealed from but a judge may, on such terms as are just, stay the operation of the order or decision until the disposition of the appeal. 2000, c.26, Sched. K, s.1

26. (1) Further Appeal. A party to the hearing before the Superior Court of Justice under section 25 may appeal from the decision to the Divisional Court. 1992, c.23, s.26(1); 2002, c.9, s.41(1)

(2) Minister Represented. The Minister is entitled to be heard, by counsel or otherwise, upon the argument of an appeal under this section. 1992, c.23, s.26(2)

(3) Powers of Divisional Court. An appeal under this section may be made on any question that is not a question of fact alone and the Divisional Court may,

(a) confirm or alter the decision of the judge;
(b) direct the chief building official, registered code agency or inspector to take any action that the official, agency or inspector is authorized to take under this Act;
(c) refer the matter back to the judge for reconsideration; or
(d) substitute its opinion for that of the chief building official, registered code agency, inspector or judge. 2002, c.9, s.41(2)

27. (1) Service. A notice or order required by this Act to be served may be served personally or by registered mail sent to the last known address of the person to whom notice is to be given or to that person's agent for service. 1992, c.23, s.27(1)

(2) Idem. If a notice or order is served by registered mail, the service shall be deemed to have been made on the fifth day after the day of mailing unless the person to whom the notice or order is given or that person's agent for service establishes that, acting in good faith, through absence, accident, illness or other unintentional cause the notice was not received until a later date. 1992, c.23, s.27(2); 1997, c.24, s.224(15)

Authorizations and Rulings

28. (1) Building Materials Evaluation Commission. The Building Materials Evaluation Commission is continued under the name Building Materials Evaluation Commission in English and Commission d'évaluation des matériaux de construction in French and shall be composed of those persons appointed by the Lieutenant Governor in Council. 1992, c.23, s.28(1)

(2) Chair. The Lieutenant Governor in Council may designate one of the members as chair and one of the members as vice-chair. 1992, c.23, s.28(2)

(3) Remuneration. The members of the Commission shall receive such remuneration and expenses as the Lieutenant Governor in Council may determine. 1992, c.23, s.28(3)

(4) Powers and Duties. The Building Materials Evaluation Commission may,

(a) conduct research on, and examine, construction materials, systems and building designs or cause such research to be conducted and examinations to be undertaken;
(b) upon application therefor, authorize the use, subject to any conditions that may be set out, of any innovative material, system or building design in respect of any building or part thereof; and
(c) make recommendations to the Minister respecting changes in this Act or the building code. 1992, c.23, s.28(4); 2002, c.9, s.43

(5) Innovative Materials. The use of any innovative material, system or building design in the manner approved by the Commission shall be deemed not to be a contravention of the building code. 1992, c.23, s.28(5)

28.1 (1) Binding Interpretations by the Minister. The Minister may issue a written interpretation of any provision of the building code, and the Minister's interpretation is binding on any person exercising a power or performing a duty under this Act and on any person who is subject to this Act. 2002, c.9, s.44

(2) Public Notice. A statement setting out the Minister's interpretation of a provision of the building code shall be made available to the public in the prescribed manner. 2002, c.9, s.44

(3) *Legislation Act, 2006*, Part III. The Minister's interpretation of a provision of the building code is not a regulation within the meaning of Part III (Regulations) of the *Legislation Act, 2006*. 2002, c.9, s.44; 2006, c.21, Sched. F, s.136(1)

(4) Delegation. The Minister may delegate his or her power under subsection (1) to the director. 2002, c.9, s.44

29. (1) Rulings by Minister. The Minister may, subject to such conditions as the Minister in his or her discretion considers appropriate, make rulings,

(a) approving the use of innovative materials, systems or building designs evaluated by a materials evaluation body designated in the building code;

(b) adopting an amendment to a code, formula, standard, guideline, protocol or procedure that has been adopted by reference in the building code; or

(c) approving the use of alternative materials, systems and building designs which, in the opinion of the Minister, will achieve the level of performance required by the building code. 1997, c.30, Sched. B, s.14(1); 1999, c.12, Sched. M, s.9(1); 2002, c.9, s.45(1)

(2) Delegation. The Minister may by order delegate the power to make rulings to the director. 1992, c.23, s.29(2)

(3) Status. A ruling is not a regulation within the meaning of Part III (Regulations) of the *Legislation Act, 2006*. 1992, c.23, s.29(3); 2006, c.21, Sched. F, s.136(1);

(4) Publication. Notice of a ruling shall be published at least once in *The Ontario Gazette* and made available, upon request, to members of the public. 1992, c.23, s.29(4)

(5) Application. A ruling of the Minister under clause (1)(a) or (c) entitles a person to use the approved material, system or building design in all of Ontario unless the ruling states otherwise. 1999, c.12, Sched. M, s.9(2)

(6) Approved Materials. The use of an approved material, system or building design in the manner approved in a ruling under clause (1)(a) or (c) shall be deemed not to be a contravention of the building code. 1999, c.12, Sched. M, s.9(2)

(7) Conflicts. In the event of a conflict between an authorization of the Building Materials Evaluation Commission and a ruling of the Minister under clause (1)(a) or (c), the ruling prevails. 1992, c.23, s.29(7); 1997, c.30, Sched. B, s.14(4); 2002; c.9, s.45(2)

(8) Restriction. If a materials evaluation body designated in the building code has examined or has expressed its intention to examine an innovative material, system or building design, the Building Materials Evaluation Commission shall not exercise its power under subsection 28(4) in respect of that material, system or building design. 1992, c.23, s.29(8)

30. (1) Inquiry. If it appears to the Minister that there is or may be a failure in construction or demolition standards or in the enforcement of this Act or the building code, the Minister may designate a person to conduct an inquiry into the failure. 1992, c.23, s.30(1)

(2) Powers. The person conducting the inquiry has the powers of a commission under Part II of the *Public Inquiries Act*, which Part applies to the inquiry as if it were an inquiry under that Act. 1992, c.23, s.30(2)

General

31. (1) Immunity from Action. No action or other proceeding for damages shall be instituted against the director, a member of the Building Code Commission or the Building Materials Evaluation Commission, or anyone acting under their authority, a person conducting an inquiry under section 30, a chief building official, an inspector or an officer for any act done in good faith in the execution or intended execution of any power or duty under this Act or the regulations or for any alleged neglect or default in the execution in good faith of that power or duty. 1992, c.23, s.31(1); 1997, c.24, s.224(16)

(2) Liability. Subsection (1) does not relieve the Crown, a municipality, an upper-tier municipality, a board of health, a planning board or a conservation authority of liability in respect of a tort committed by their respective chief building official or inspectors to which they would otherwise be subject and the Crown, municipality or upper-tier municipality, board of health, planning board or conservation authority is liable for any such tort as if subsection (1) were not enacted. 2002, c.17, Sched. F, Table

(3) Immunity re Registered Code Agencies. The Crown, a municipality, an upper-tier municipality, a board of health, a planning board or a conservation authority is not liable for any harm or damage resulting from any act or omission by a registered code agency or by a person authorized by a registered code agency under subsection 15.17(1) in the performance or intended performance of any function set out in section 15.15. 2002, c.9, s.47; 2002, c.17, Sched. C, s.6(1)

(4) Same. The Crown, a municipality, an upper-tier municipality, a board of health, a planning board or a conservation authority is not liable for any harm or damage resulting from any act or omission in the execution or intended execution of any power or duty under this Act or the regulations by their respective chief building official or inspectors if the act was done or omitted in reasonable reliance on a certificate issued or other information given under this Act by a registered code agency or by a person authorized by a registered code agency under subsection 15.17(1). 2002, c.9, s.47; 2002, c.17, Sched. C, s.6(2)

32. Repealed. 2002, c.9, s.48

32.1 Repealed. 2002, c.9, s.49

33. Repealed. 2002, c.9, s.50

34. (1) Regulations. The Lieutenant Governor in Council may make regulations governing standards for the construction and demolition of buildings, including,

1. designating structures that are to be defined as buildings under subsection 1(1);

1.1 prescribing the functions for which a registered code agency may be appointed under subsection 4.1(4);

1.2 prescribing the information that a principal authority is required to give to the director under subsection 4.1(8);

1.3 prescribing the persons who may appoint a registered code agency under subsection 4.2(2);

1.4 prescribing the manner in which the appointment of a registered code agency under section 4.2 may be made and prescribing conditions and restrictions with respect to each appointment;

1.5 prescribing the information that a person who appoints a registered code agency is required to give to the director under subsection 4.2(9) or to the chief building official under subsection 4.2(10);

2. prescribing the conditions under which "as constructed plans" may be required by a chief building official under clause 7(g);

2.1 prescribing the information about the fees and costs to be included in a report under subsection 7(4) and the manner in which the report is to be made available to the public;

2.2 prescribing the persons to whom notice of proposed changes in fees is to be given under subsection 7(6), the information to be included in the notice and the manner in which the notice is to be given;

2.3 prescribing the period within which the public meeting referred to in subsection 7(6) must be held;

2.4 prescribing the records to be maintained by a principal authority and the period for which the records must be retained;

3. governing the manner of construction and types and quality of materials used therein;

3.1 establishing objectives governing the standards for the construction and demolition of buildings;

3.2 prescribing the persons who may apply for a permit under section 8 and the information to be provided with an application for a permit under section 8;

3.3 prescribing the information that a plans review certificate must contain for the purposes of clause 8(2)(d);

3.4 prescribing the period within which the chief building official is required to make a decision under subsections 8(2.2) and (2.3) and the manner of determining when the period begins;

3.5 prescribing the information that a plans review certificate must contain under subsection 8(2.1) and a change certificate must contain under subsection 8(14);

4. setting out the applicable laws with which compliance must be achieved before a conditional permit may be issued under subsection 8(3);

5. governing the design of buildings and the use to which they may be put;

6. Repealed.

7. setting out rules and policies to be observed in the interpretation of the building code by any person exercising a power or discretion conferred under the Act or the building code;

8. determining an increase in hazard for the purposes of section 10;

9. adopting by reference, in whole or in part, with such changes as the Lieutenant Governor in Council considers necessary, any code, formula, standard, guideline, protocol or procedure and requiring compliance with any code, formula, standard, guideline, protocol or procedure that is so adopted.

10. requiring any part of the design, construction or demolition of a building to be under the general review of an architect as defined in the *Architects Act* or a professional engineer as defined in the *Professional Engineers Act* and that copies of reports arising from the general review be provided to the chief building official or a registered code agency;

11. designating organizations to test prefabricated building units to the standards prescribed by the building code and providing for the placing of their label on units that conform to the standards;

12. requiring the approval of an inspector or a registered code agency in respect of any method, matter or thing;
13. requiring the posting on buildings or sites of construction or demolition of such documents or information as is prescribed;
14. requiring such documents, information, records, drawings or specifications as are prescribed to be kept on the site of construction or demolition;
14.1 prescribing the records to be kept by any person and the returns of information and reports to be made by any person and providing for the inspection and examination of the records.
15. requiring notice to be given to the chief building official, an inspector or a registered code agency respecting any matter in the course of construction, including notice of readiness for inspection at the stages of construction of a building, and specifying the person required to give the notices;
15.1 prescribing the type and manner of inspections for the purposes of subsection 10.2(2) (readiness for inspection) and prescribing the period within which the inspections must be carried out;
15.2 prescribing the information that must be given to the chief building official about a person who is required by subsection 15.12(3) to have certain qualifications or to meet certain requirements or both;
15.3 prescribing the information that must be given to the chief building official under subsection 15.13(5) about any person required to have insurance coverage and about the coverage;
15.4 prescribing the manner in which a referral to the chief building official under subsection 14(5) must be made;
16. requiring notice to be given to the chief building official respecting the change in prescribed classes of use made of a building;
17. requiring the chief building official to transmit to the director such returns or reports as are prescribed;
18. prescribing conditions under which a building or any part of a building may be occupied, including requiring notice to be given to a chief building official or registered code agency and requiring permission to be received from the official or agency before the building or part may be occupied;
19. exempting any building or person or class thereof from compliance with all or any part of this Act and the regulations and prescribing conditions for the exemption;
20. prescribing the form of a warrant and the form in which the information upon oath will be taken under section 21;
21. requiring the alteration of any part of an existing building where construction in relation to the building affects that part;

22. requiring the payment of fees in respect of applications to the Building Materials Evaluation Commission and prescribing the amounts thereof;

22.1 prescribing the manner in which the Minister's written interpretations under section 28.1 are to be made available to the public;

23. designating materials evaluation bodies for the purposes of section 29;

24. establishing criteria to be followed by the Minister in respect of a ruling under section 29;

25. prescribing procedures of the Building Code Commission and the Building Materials Evaluation Commission;

26. prescribing the persons to whom notice shall be given of the issuance of a permit, the time for giving the notice and the class of buildings for which notice is required;

27. defining, for the purposes of this Act and the building code, any word or expression not defined in this Act, and in so doing may define a word or expression differently for different provisions;

28. prescribing forms and providing for their use or requiring that forms provided by the Minister or the director be used, and prescribing the information that must be contained in the forms;

29. prescribing boards of health, planning boards and conservation authorities that are responsible for the enforcement of the provisions of this Act related to sewage systems and the municipalities and territory without municipal organization in which they will have jurisdiction to carry out the enforcement;

30. permitting chief building officials or registered code agencies, subject to such conditions as are set out in the building code, to allow the use of materials, systems and building designs other than those prescribed in the building code with respect to the construction of buildings;

31. governing the location of sewage systems;

32. designating areas in which any class of sewage system may not be established;

33. prescribing qualifications for chief building officials, inspectors, registered code agencies, designers and other persons referred to in section 15.12 and related matters including,
    i. requiring different qualifications for different classes of officials, inspectors, agencies, designers and other persons,
    ii. requiring assessments or examinations in connection with obtaining or maintaining the required qualifications,
    iii. establishing one or more registers identifying persons with qualifications and such other information as the regulation may require, and

iv. requiring fees to be paid in connection with the qualifications;

34. establishing certification, registration or licensing schemes for chief building officials, inspectors, registered code agencies, designers and other persons referred to in sections 15.11 (qualifications) and 15.12 (qualifications re sewage systems) which may include provision for,
    i. the eligibility or ineligibility of classes of persons to obtain certification, registration or a licence,
    ii. categories or classes of certification, registration or licence,
    iii. application for the issuance, amendment or renewal of a certificate, registration or a licence,
    iv. the issuance, amendment or renewal of a certificate, registration or a licence or the refusal to do so,
    v. suspension, revocation or cancellation of a certificate, registration or a licence,
    vi. the imposition of conditions relating to a certificate, registration or licence, including conditions relating to the qualifications of directors, officers, partners, employees and others associated with the holder of the certificate, registration or licence, conditions relating to the manner in which specified persons carry out activities under this Act and the building code and conditions relating to insurance coverage, including the kinds and amounts of insurance and the circumstances in which a person will be considered to be covered by insurance,
    vii. the establishment and maintenance of one or more registers containing information about the holders of certificates, registrations or licences and containing such information as may be given to the director under paragraph 35.1, and
    viii. fees payable in connection with certification, registration or licensing;

35. prescribing an appeal to a prescribed tribunal from a refusal to issue or renew a certificate, registration or licence or a suspension, revocation or cancellation of a certificate, registration or licence, prescribing the circumstances in which the decision appealed from takes effect immediately despite the appeal, and prescribing the circumstances in which the tribunal may stay the decision pending the outcome of the appeal;

35.1 requiring the Ontario Association of Architects and the Association of Professional Engineers of Ontario to give the prescribed information to the director;

35.2 prescribing fees payable to the Crown by the Ontario Association of Architects and the Association of Professional Engineers of Ontario in connection with the registers referred to in paragraphs 33 and 34 and in respect of the development of training materials for a purpose described in paragraph 33 or 34;

35.3 prescribing the persons who are required under subsection 15.13(1) to have insurance coverage and prescribing the kinds and amounts of insurance that are required and the circumstances in which the person will be considered to be covered by insurance;

35.4 prescribing additional functions that registered code agencies may perform;

35.5 prescribing the manner in which registered code agencies and persons authorized by them under subsection 15.17(1) are required to perform any of their functions;

35.6 prescribing the manner in which a registered code agency is authorized to collect, use and disclose information;

35.7 prescribing circumstances in which a registered code agency may be appointed in respect of a building even though an inspector or another registered code agency has already carried out a function described in section 15.15;

35.8 prescribing circumstances in which a registered code agency cannot be appointed, including circumstances that would constitute a conflict of interest for a registered code agency;

35.9 prescribing the information that a registered code agency is required to give to the director or to the chief building official;

35.10 prescribing the classes of persons that may be authorized by a registered code agency under subsection 15.17(1), the conditions to which the authorization may be subject and the information that must be included in a certificate of authorization;

35.11 prescribing certificates and the form of certificates referred to in subsection 15.18 (2), the information that the certificates are required to contain and the circumstances and manner in which registered code agencies are permitted to issue them;

35.12 prescribing the circumstances in which the appointment of a registered code agency may be terminated and the conditions that must be met before the termination of an appointment, including,

- i. requiring the consent of the director and authorizing the director to impose conditions and restrictions in connection with the consent, and
- ii. authorizing an appeal to a person specified in the regulations from a decision of the director or conditions imposed by the director;

36. designating persons, specifying powers of a chief building official or inspector that those designated persons may exercise to enforce this Act and the building code in relation to the qualifications of persons described in sections 15.11 and 15.12 and the requirement in section 15.13 for insurance coverage, and establishing conditions for the exercise of the specified powers;
37. prescribing transitional matters necessary for the regulation of sewage systems, including matters relating to,
    i. licensing and certification and the qualification of inspectors and persons described in subsection 15.12(1);
    ii. certificates of approval and orders issued under the *Environmental Protection Act*,
    iii. enforcement issues,
    iv. matters commenced under the *Environmental Protection Act*, including appeals,
    v. records and documents to be kept or transferred and the payment of associated costs,
    vi. certification of records and their use in courts,
    vii. the continuation of matters commenced under the *Environmental Protection Act*, and
    viii. the transfer of responsibilities involving any municipality or any board of health, conservation authority or planning board prescribed under section 3.1.
38. permitting the Building Code Commission to sit in one or more divisions simultaneously upon such conditions as may be prescribed in the regulation;
39. authorizing one member of the Building Code Commission, with the approval of the chair or vice-chair, to hear and determine any matter and deeming the member to constitute the commission for that purpose, under such conditions as may be prescribed in the regulation;

39.1 prescribing relationships for the purposes of clause 23(3)(d) (eligibility to be a member of the Commission);

39.2 prescribing the period within which the Building Code Commission must hold a hearing in respect of a dispute described in clause 24(1)(b) or (c);

39.3 providing for transitional provisions relating to the effect of a repeal or re-enactment of any provision of this Act;

40. prescribing any matter referred to in this Act as prescribed. 1992, c.23, s.34(1); 1997, c.30, Sched. B, s.17(1-4); 1999, c.12, Sched. M, s.11; 2002, c.9, s.51(1, 2, 4-14); 2006, c.19, Sched. O, s.1(12-17); 2006, c.35, Sched. C, s.8(3); 2009 c.33, Sched. 21, s.2(7)

(2) Standards for Existing Buildings. The Lieutenant Governor in Council may make regulations to establish standards that existing buildings must meet even though no construction is proposed, including regulations,

(a) prescribing any or all of the matters set out in subsection (1) as applicable to existing buildings;

(b) establishing standards for maintenance, retrofit, operation, occupancy and repair;

(c) prescribing standards related to resource conservation and environmental protection; and

(d) prescribing standards, methods and equipment for the inspection, cleaning, disinfecting and emptying of sewage systems. 1992, c.23, s.34(2); 1997, c.30, Sched. B, s.17(5); 2006, c.22, s.112(10)

(2.1) Discretionary Maintenance Inspection Programs. The Lieutenant Governor in Council may make regulations governing programs established under clause 7(1)(b.1), including regulations,

(a) governing the classes of buildings and area affected by a program;

(b) governing the type and manner of inspections that are conducted under a program and the frequency of the inspections;

(c) authorizing the principal authority that establishes a program, as an alternative to conducting an inspection, to accept a certificate, in a form approved by the Minister, that is signed by a person who belongs to a class of persons specified by the regulations and that confirms that the person has conducted an inspection and is of the opinion that the building that was inspected complies with the standards prescribed under clause (2)(b) that are enforced by the program. 2006, c.22, s.112(11)

(2.2) Sewage System Maintenance Inspection Programs. The Lieutenant Governor in Council may make regulations establishing and governing programs to enforce standards prescribed under clause (2)(b) in relation to sewage systems, including regulations,

(a) governing the classes of sewage systems affected by the program;

(b) requiring a principal authority that has jurisdiction in the area affected by the program to administer the program for that area and to conduct inspections under the program;

(c) governing the type and manner of inspections that are conducted under the program and the frequency of the inspections;

(d) authorizing the principal authority that administers the program, as an alternative to conducting an inspection, to accept a certificate, in a form approved by the Minister, that is signed by a person who belongs to a class of persons specified by the regulations and that confirms that the person has conducted an inspection and is of the opinion that the sewage system that was inspected complies with the standards prescribed under clause (2)(b) that are enforced by the program. 2006, c 22, s.112(11).

(3) Application. A regulation made under this section applies to buildings whether erected before or after the coming into force of this Act. 1992, c.23, s.34(3)

(4) Limited Application. Any regulation made under this section may be limited in its application territorially or to any class of activity, matter, person or thing. 1997, c.30, Sched. B, s.17(6)

(4.1) Same. A class under this Act may be defined with respect to any attribute, quality or characteristic and may be defined to consist of, include or exclude any specified member whether or not with the same attributes, qualities or characteristics. 1997, c.30, Sched. B, s.17(6)

(4.2) Retroactive. A regulation made under paragraph 37 of subsection (1) may be retroactive. 1997, c.30, Sched. B, s.17(6)

(5) Purposes. The purposes of the regulations made under this section are,

(a) to establish standards for public health and safety, fire protection, structural sufficiency, conservation, including, without limitation, energy and water conservation, and environmental integrity, and to establish barrier-free requirements, with respect to buildings; and

(b) to establish processes for the enforcement of the standards and requirements. 2002, c.9, s.51(15); 2009, c.12, Sched. J, s.1(1)

(6) Review. The Minister shall initiate a review of the building code with reference to standards for energy conservation on or before the day that is six months after the day Schedule J of the *Green Energy and Green Economy Act, 2009* comes into force and thereafter within five years of the end of the previous review. 2009, c.12, Sched. J, s.1(2)

34.1 (1) Building Code Energy Advisory Council. The Minister shall establish a council to be known in English as the Building Code Energy Advisory Council and in French as Conseil consultatif des questions énergétiques liées au code du bâtiment. 2009, c.12, Sched. J, s.2

(2) Same. The Minister may appoint one or more persons to the Council and fix its terms of reference. 2009, c.12, Sched. J, s.2

(3) Functions. The Council shall,

(a) advise the Minister on the building code with reference to standards for energy conservation; and

(b) perform such other functions as the Minister may specify. 2009, c.12, Sched. J, s.2

35. (1) Municipal By-laws. This Act and the building code supersede all municipal by-laws respecting the construction or demolition of buildings. 1992, c.23, s.35(1)

(2) Different Treatments. In the event that this Act or the building code and a municipal by-law treat the same subject-matter in different ways in respect to standards for the use of a building described in section 10 or standards for the maintenance or operation of a sewage system, this Act or the building code prevails and the by-law is inoperative to the extent that it differs from this Act or the building code. 1992, c.23, s.35(2); 1997, c.30, Sched. B, s.18(1)

(3) Interpretation. For the purposes of this section, a municipal by-law includes a by-law of an upper-tier municipality and a local board as defined in the *Municipal Affairs Act*. 2002, c.17, Sched. F, Table

35.1 Status of Conservation Authority Regulations. A regulation made by a conservation authority under this Act is not a regulation within the meaning of Part III (Regulations) of the *Legislation Act, 2006*. 2002, c.9, s.52; 2006, c.21, Sched. F, s.136(1)

36. (1) Offences. A person is guilty of an offence if the person,

(a) knowingly furnishes false information in any application under this Act, in any certificate required to be issued or in any statement or return required to be furnished under this Act or the regulations;

(b) fails to comply with an order, direction or other requirement made under this Act; or

(c) contravenes this Act, the regulations or a by-law passed under section 7. 1992, c.23, s.36(1); 1997, c.24, s.224(17); 1997, c.30, Sched. B, s.19; 2002, c.9, s.53(1); 2009, c.33, Sched. 21, s.2(8)

(2) Idem. Every director or officer of a corporation who knowingly concurs in the furnishing of false information, the failure to comply or the contravention under subsection (1) is guilty of an offence. 1992, c.23, s.36(2)

(3) Penalties. A person who is convicted of an offence is liable to a fine of not more than $50,000 for a first offence and to a fine of not more than $100,000 for a subsequent offence. 2005, c.33, s.1

(4) Corporations. If a corporation is convicted of an offence, the maximum penalty that may be imposed upon the corporation is $100,000 for a first offence and $200,000 for a subsequent offence and not as provided in subsection (3). 2005, c.33, s.1

(5) Subsequent Offence. For the purposes of subsections (3) and (4), an offence is a subsequent offence if there has been a previous conviction under this Act. 1992, c.23, s.36(5)

(6) Continuing Offence. Every person who fails to comply with an order made by a chief building official under subsection 14(1) or clause 15.9(6)(a) is guilty of an offence and on conviction, in addition to the penalties mentioned in subsections (3) and (4), is liable to a fine of not more than $10,000 per day for every day the offence continues after the time given for complying with the order has expired. 1992, c.23, s.36(6); 2002, c.9, s.53(2)

(7) Power to Restrain. If this Act or the regulations are contravened and a conviction is entered, in addition to any other remedy and to any penalty imposed by this Act, the court in which the conviction is entered, and any court of competent jurisdiction thereafter, may make an order prohibiting the continuation or repetition of the offence by the person convicted. 1992, c.23, s.36(7)

(8) Limitation Period. No proceeding under this section shall be commenced more than one year after the facts on which the proceeding is based first came to the knowledge of,

(a) an officer, where the proceeding is in respect of the enforcement of by-laws passed under section 15.1; or

(b) the chief building official, in any other case. 1992, c.23, s.36(8); 2009, c.33, Sched. 21, s.2(9)

(8.1) Same. Subsection (8), as it read immediately before the day subsection 2 (9) of Schedule 21 to the *Good Government Act, 2009* comes into force, continues to apply where the subject-matter of the proceeding arose more than one year before that day. 2009, c.33, Sched. 21, s.2(9)

(9) Proceeds of Fines. If an offence under this section has been committed within a municipality, the proceeds of a fine imposed under this section shall be paid to the treasurer of that municipality, and section 2 of the *Administration of Justice Act* and section 4 of the *Fines and Forfeitures Act* do not apply in respect of the fine. 1992, c.23, s.36(9)

(10) Same, Sewage System Offences. Despite subsection (9), if an offence under this section concerns the provisions of this Act and the building code related to sewage systems and if it is committed in a municipality or territory without municipal organization that is prescribed under subsection 3.1(1), the proceeds of a fine imposed under this section shall be paid to the applicable board of health, planning board or conservation authority prescribed under subsection 3.1(1), and section 2 of the *Administration of Justice Act* and section 4 of the *Fines and Forfeitures Act* do not apply in respect of the fine. 2002, c.9, s.53(3)

37. (1) Proof of Directions, Orders, etc. In any prosecution for an offence under this Act, a copy of a direction or order purporting to have been made under this Act or the regulations and purporting to have been signed by the person authorized by this Act to make the direction or order is, in the absence of evidence to the contrary, proof of the direction or order without proof of the signature or authority. 1992, c.23, s.37(1)

(2) Same. A statement as to any matter of record in an office of the chief building official or an officer purporting to be certified by the chief building official or an officer is, without proof of the office or signature of the chief building official or officer, receivable in evidence as proof, in the absence of evidence to the contrary, of the facts stated therein in any civil proceeding or proceeding under the *Provincial Offences Act*. 1997, c.24, s.224(18)

38. (1) Restraining Order. Where it appears to a chief building official that a person does not comply with this Act, the regulations or an order made under this Act, despite the imposition of any penalty in respect of the non-compliance and in addition to any other rights he or she may have, the chief building official may apply to the Superior Court of Justice for an order directing that person to comply with the provision. 1992, c.23, s.38(1); 2002, c.9, s.54

(2) Idem. Upon the application under subsection (1), the judge may make the order or such other order as the judge thinks fit. 1992, c.23, s.38(2)

(3) Appeal. An appeal lies to the Divisional Court from an order made under subsection (1). 1992, c.23, s.38(3)

38.1 (1) Suspension of Licence. If a person is in default of payment of a fine imposed upon conviction for an offence under this Act or the regulations, on the application of a prescribed person, an order may be made under subsection 69(2) of the *Provincial Offences Act* directing that one or more of the licences of the person who is in default be suspended and no licence be issued to that person until the fine is paid. 1997, c.30, Sched. B, s.20

(2) Duty of Prescribed Person. A prescribed person shall,

(a) on being informed of an order referred to in subsection (1), suspend the licence in accordance with the order; and

(b) on being informed that the fine and any applicable prescribed administrative fee for the reinstatement of the licence are paid, reinstate the licence. 1997, c.30, Sched. B, s.20

(3) No Reinstatement. The prescribed person shall not reinstate a licence under clause (2)(b) if he or she is informed that,

(a) there is another outstanding order referred to in subsection (1) directing that the licence be suspended; or

(b) the licence is suspended under any other order or under another statute. 1997, c.30, Sched. B, s.20

(4) Definition. In this section,

"licence" means a licence, certification, or registration issued under the building code. 2002, c.9, s.55

BUILDING CODE

Division A
Compliance, Objectives and Functional Statements

Part 1
Compliance and General

Section 1.1. Organization and Application

1.1.1. Organization of this Code 3

1.1.2. Application of Division B 3

1.1.3. Building Size Determination 6

Section 1.2. Compliance

1.2.1. Compliance with Division B 6

1.2.2. Materials, Appliances, Systems and Equipment ... 7

Section 1.3. Interpretation

1.3.1. Interpretation 7

Section 1.4. Terms and Abbreviations

1.4.1. Definitions of Words and Phrases 9

1.4.2. Symbols and Other Abbreviations 30

Section 1.5. Referenced Documents and Organizations

1.5.1. Referenced Documents 33

1.5.2. Organizations 33

Part 1

Compliance and General

Section 1.1. Organization and Application

1.1.1. Organization of this Code

1.1.1.1. Scope of Division A

(1) Division A contains compliance and application provisions and the *objectives* and *functional statements* of this Code.

1.1.1.2. Scope of Division B

(1) Division B contains the *acceptable solutions* of this Code.

1.1.1.3. Scope of Division C

(1) Division C contains the administrative provisions of this Code.

1.1.1.4. Internal Cross-references

(1) If a provision of this Code contains a reference to another provision of this Code but no Division is specified, both provisions are in the same Division of this Code.

1.1.2. Application of Division B

1.1.2.1. Application of Parts 1, 7 and 12

(1) Parts 1, 7 and 12 of Division B apply to all *buildings*.

1.1.2.2. Application of Parts 3, 4, 5 and 6

(1) Subject to Articles 1.1.2.6. and 1.3.1.2., Parts 3, 5 and 6 of Division B apply to all *buildings*,

(a) used for *major occupancies* classified as,

  (i) Group A, *assembly occupancies*,

  (ii) Group B, *care or detention occupancies*,

  (iii) Group F, Division 1, *high hazard industrial occupancies*, or

(b) exceeding 600 m^2 in *building area* or exceeding three *storeys* in *building height* and used for *major occupancies* classified as,
  (i) Group C, *residential occupancies*,
  (ii) Group D, *business and personal services occupancies*,
  (iii) Group E, *mercantile occupancies*, or
r$_4$ (iv) Group F, Divisions 2 and 3, *medium hazard industrial occupancies* and *low hazard industrial occupancies*.

r$_4$ **(2)** Subject to Articles 1.1.2.6. and 1.3.1.2., Part 4 of Division B applies to,
(a) *post-disaster buildings*,
(b) *buildings* described in Sentence (1),
(c) a retaining wall exceeding 1 000 mm in exposed height adjacent to,
  (i) public property,
  (ii) access to a *building*, or
  (iii) private property to which the public is admitted,
(d) a pedestrian bridge appurtenant to a *building*,
(e) a crane runway,
(f) an exterior storage tank and its supporting structure that is not regulated by the *Technical Standards and Safety Act, 2000*,
(g) signs regulated by Section 3.15. of Division B that are not structurally supported by a *building*,
(h) a structure that supports a wind turbine generator having a rated output of more than 3 kW,
(i) a communication tower exceeding 16.6 m above ground level, and
(j) an *outdoor pool* that has a water depth greater than 3.5 m at any point.

(3) Section 3.11. of Division B applies to *public pools*.

(4) Section 3.12. of Division B applies to *public spas*.

(5) Section 3.15. of Division B applies to signs.

1.1.2.3. Application of Part 8

(1) Part 8 of Division B applies to the *construction*, operation and maintenance of all *sewage systems* and to the *construction* of *buildings* in the vicinity of *sewage systems*.

1.1.2.4. Application of Part 9

(1) Subject to Articles 1.1.2.6. and 1.3.1.2., Part 9 of Division B applies to all *buildings*,

(a) of three or fewer *storeys* in *building height*,
(b) having a *building area* not exceeding 600 m^2, and
(c) used for *major occupancies* classified as,
  (i) Group C, *residential occupancies*,
  (ii) Group D, *business and personal services occupancies*,
  (iii) Group E, *mercantile occupancies*, or
r1 (iv) Group F, Divisions 2 and 3, *medium hazard industrial occupancies* and *low hazard industrial occupancies*.

1.1.2.5. Application of Part 10

(1) Part 10 of Division B applies to existing *buildings* requiring a permit under section 10 of the Act.

1.1.2.6. Application of Part 11

(1) Except as provided in Sentence (2), Part 11 of Division B applies to the design and *construction* of existing *buildings*, or parts of existing *buildings*, that have been in existence for at least five years.

(2) If a *building* has been in existence for at least five years but includes an addition that has been in existence for less than five years, Part 11 of Division B applies to the entire *building*.

1.1.2.7. Existing Buildings

r4 **(1)** Except as provided in Section 3.17. of Division B, Section 9.41. of Division B and Part 11 of Division B, if an existing *building* is extended or is subject to material alteration or repair, this Code applies only to the design and *construction* of the extensions and those parts of the *building* that are subject to the material alteration or repair.

(2) If an existing previously occupied *building* is moved from its original location to be installed elsewhere, or is dismantled at its original location and moved to be reconstituted elsewhere, this Code applies only to changes to the design and *construction* of the *building* required as a result of moving the *building*.

1.1.3. Building Size Determination

1.1.3.1. Building Size Determination of Building Divided by Firewalls

(1) Where a *firewall* divides a *building*, each portion of the *building* that is divided shall be considered as a separate *building*, except for the purposes of,

r4 (a) a determination of *gross area* in Section 1.2. of Division C,

(b) a fire alarm and detection system in Sentence 3.2.4.2.(1) of Division B or Article 9.10.18.1. of Division B, and

(c) a *plumbing system* interconnected through a *firewall*.

1.1.3.2. Building Size Determination of Building Divided by Vertical Fire Separations

(1) Except as permitted in Sentence (2), if portions of a *building* are completely separated by a vertical *fire separation* that has a *fire-resistance rating* of at least 1 h and that extends through all *storeys* and *service spaces* of the separate portions, each separated portion may be considered to be a separate *building* for the purpose of determining *building height* if,

(a) each separated portion is not more than three *storeys* in *building height* and is used only for *residential occupancies*, and

(b) the unobstructed path of travel for a fire fighter from the nearest *street* to one entrance to each separated portion is not more than 45 m.

(2) The vertical *fire separation* in Sentence (1) may terminate at the floor assembly immediately above a *basement* if the *basement* conforms to Article 3.2.1.2. of Division B.

Section 1.2. Compliance

1.2.1. Compliance with Division B

1.2.1.1. Compliance with Division B

(1) Compliance with Division B shall be achieved,

(a) by complying with the applicable *acceptable solutions* in Division B, or

(b) by using *alternative solutions* that will achieve the level of performance required by the applicable *acceptable solutions* in respect of the *objectives* and *functional statements* attributed to the applicable *acceptable solutions* in Supplementary Standard SA-1.

(2) For the purposes of Clause (1)(b), the level of performance in respect of a *functional statement* refers to the performance of the *functional statement* as it relates to the *objective* with which it is associated in Supplementary Standard SA-1.

1.2.2. Materials, Appliances, Systems and Equipment

1.2.2.1. Characteristics of Materials, Appliances, Systems and Equipment

(1) All materials, *appliances*, systems and equipment installed to meet the requirements of this Code shall possess the necessary characteristics to perform their intended functions when installed in a *building*.

1.2.2.2. Used Materials, Appliances and Equipment

(1) Unless otherwise specified, recycled materials in *building* products may be used and used materials, *appliances* and equipment may be reused when they meet the requirements of this Code for new materials and are satisfactory for their intended use.

Section 1.3. Interpretation

1.3.1. Interpretation

1.3.1.1. Designated Structures

r_4 **(1)** The following structures are designated for the purposes of clause (d) of the definition of *building* in subsection 1(1) of the Act:

(a) a retaining wall exceeding 1 000 mm in exposed height adjacent to,
  (i) public property,
  (ii) access to a *building*, or
  (iii) private property to which the public is admitted,
(b) a pedestrian bridge appurtenant to a *building*,
(c) a crane runway,

(d) an exterior storage tank and its supporting structure that is not regulated by the *Technical Standards and Safety Act, 2000*,

(e) signs regulated by Section 3.15. of Division B that are not structurally supported by a *building*,

(f) a solar collector that is mounted on a *building* and has a face area equal to or greater than 5 m^2,

(g) a structure that supports a wind turbine generator having a rated output of more than 3 kW,

(h) a dish antenna that is mounted on a *building* and has a face area equal to or greater than 5 m^2,

(i) a communication tower exceeding 16.6 m above ground level,

(j) an *outdoor pool*, and

(k) reserved,

(l) an outdoor *public spa*.

1.3.1.2. Farm Buildings

r_4 **(1)** Except as provided in Sentences (2) to (4), *farm buildings* shall conform to the requirements in the CCBFC, "National Farm Building Code of Canada".

(2) Articles 1.1.1.2. and 3.1.8.1. and Subsections 3.1.4. and 4.1.4. in the CCBFC, "National Farm Building Code of Canada" do not apply to *farm buildings*.

(3) In the CCBFC, "National Farm Building Code of Canada", references in Articles 1.1.1.3., 2.2.2.1., 2.2.2.2., 2.3.1.1., 2.3.2.1., 3.1.1.1., 3.1.1.2., 3.1.2.1. and 3.1.6.1. to the CCBFC, "National Building Code of Canada" are deemed to be references to Ontario Regulation 403/97 (Building Code), made under the Act, as that regulation read immediately before it was revoked.

(4) A *farm building* of *low human occupancy* having a *building area* not exceeding 600 m^2 and not more than three *storeys* in *building height* is deemed to comply with the structural requirements of the CCBFC, "National Farm Building Code of Canada" if it is designed and constructed in conformance with Supplementary Standard SB-11.

r_4 **(5)** A *liquid manure* storage tank shall comply with the requirements of Part 4 of Division B of this Code and the requirements of Part 4 of the CCBFC, "National Farm Building Code of Canada".

Section 1.4. Terms and Abbreviations

1.4.1. Definitions of Words and Phrases

1.4.1.1. Non-defined Terms

(1) Definitions of words and phrases used in this Code that are not included in the list of definitions in Articles 1.4.1.2. and 1.4.1.3. and are not defined in another provision of this Code shall have the meanings that are commonly assigned to them in the context in which they are used, taking into account the specialized use of terms by the various trades and professions to which the terminology applies.

1.4.1.2. Defined Terms

(1) Each of the words and terms in italics in this Code has,

(a) the same meaning as in subsection 1(1) of the Act, if not defined in clause (b), or

(b) the following meaning for the purposes of this Code and, where indicated, for the purposes of the Act:

Acceptable solution means a requirement stated in Parts 3 to 12 of Division B.

Accessible means, when applied to a *fixture*, connection, *plumbing appliance*, valve, *cleanout* or equipment, to be accessible with or without having to first remove an access panel, door or similar obstruction, but a *fixture*, connection, *plumbing appliance*, valve, *cleanout* or equipment is not accessible if access can be gained only by cutting or breaking materials.

Additional circuit vent means a *vent pipe* that is installed between a *circuit vent* and a *relief vent* to provide additional air circulation.

Air admittance valve means a one-way valve designed to allow air to enter the *drainage system* when the pressure in the *plumbing system* is less than the atmospheric pressure.

Air break means the unobstructed vertical distance between the lowest point of an *indirectly connected waste pipe* and the *flood level rim* of the *fixture* into which it discharges.

Air-conditioning is the process of treating air in a space to control simultaneously its temperature, humidity, cleanliness, and distribution to meet the comfort requirements of the occupants of the space.

Air gap means the unobstructed vertical distance through air between the lowest point of a water supply outlet and the *flood level rim* of the *fixture* or device into which the outlet discharges.

Alternative solution means a substitute for an *acceptable solution*.

Architect means, for the purposes of the Act and this Code, the holder of a licence, a certificate of practice or a temporary licence under the *Architects Act*.

As constructed plans means, for the purposes of the Act and this Code, *construction* plans and specifications that show the *building* and the location of the *building* on the property as the *building* has been constructed.

Assembly occupancy means the *occupancy* or the use of a *building* or part of a *building* by a gathering of persons for civic, political, travel, religious, social, educational, recreational or similar purposes or for the consumption of food or drink.

Auxiliary water supply means, when applied to premises, any water supply on or available to the premises other than the primary *potable* water supply for the premises.

Backflow means a flowing back or reversal of the normal direction of the flow.

Backflow preventer means a device or a method that prevents *backflow* in a *water distribution system*.

Back-siphonage means *backflow* caused by a negative pressure in the supply system.

Back-siphonage preventer means a device or a method that prevents *back-siphonage* in a *water distribution system*.

Back vent means a pipe that is installed to vent a *trap* off the horizontal section of a *fixture* drain or the *vertical leg* of a water closet or other *fixture* that has an integral siphonic flushing action and "*back vented*" has a corresponding meaning.

Backwater valve means a *check valve* designed for use in a gravity *drainage system*.

Barrier-free means, when applied to a *building* and its facilities, that the *building* and its facilities can be approached, entered and used by persons with physical or sensory disabilities.

r_4 *Basement* means one or more *storeys* of a *building* located below the *first storey*.

Bathroom group means a group of plumbing *fixtures* installed in the same room, consisting of one domestic-type lavatory, one water closet and either one bathtub, with or without a shower, or one one-headed shower.

Boiler means an *appliance* intended to supply hot water or steam for space heating, processing or power purposes.

Bottle trap means a *trap* that retains water in a closed chamber and that seals the water by submerging the inlet pipe in the liquids or by a partition submerged in the liquids.

Branch means a *soil* or *waste pipe* that is connected at its upstream end to the junction of two or more *soil* or *waste pipes* or to a *soil* or *waste stack* and that is connected at its downstream end to another *branch*, a sump, a *soil* or *waste stack* or a *building drain*.

Branch vent means a *vent pipe* that is connected at its lower end to the junction of two or more *vent pipes* and that, at its upper end, is connected to another *branch vent*, a *stack vent*, a *vent stack* or a *header*, or terminates in *open air*.

Building area means the greatest horizontal area of a *building* above *grade*,
(a) within the outside surface of exterior walls, or
(b) within the outside surface of exterior walls and the centre line of *firewalls*.

r_4 *Building Code website* means the website at www.ontario.ca/buildingcode.

Building control valve means the valve on a *water system* that controls the flow of *potable* water from the *water service pipe* to the *water distribution system*.

Building drain means the lowest horizontal piping, including any vertical *offset*, that conducts *sewage*, *clear-water waste* or storm water by gravity to a *building sewer*.

Building height means the number of *storeys* contained between the roof and the floor of the *first storey*.

Building sewer means a *sanitary building sewer* or *storm building sewer*.

Building trap means a *trap* that is installed in a *sanitary building drain* or *sanitary building sewer* to prevent circulation of air between the *sanitary drainage system* and a public sewer.

Business and personal services occupancy means the *occupancy* or use of a *building* or part of a *building* for the transaction of business or the provision of professional or personal services.

Camp for housing of workers means a camp in which *buildings* or other structures or premises are used to accommodate five or more employees.

Campground means land or premises used as an overnight camping facility that is not a *recreational camp*.

Care and treatment occupancy (Group B, Division 2) means an *occupancy* in which persons receive special care and treatment.

Care occupancy (Group B, Division 3) means an *occupancy* in which persons receive special or supervisory care because of cognitive or physical limitations, but does not include a *dwelling unit*.

Care or detention occupancy means the *occupancy* or use of a *building* or part of a *building* by persons who,

(a) are dependent on others to release security devices to permit egress,
(b) receive special care and treatment, or
(c) receive supervisory care.

r_4 *Certificate for the occupancy of a building not fully completed* means a certificate described in Sentence 3.7.4.3.(5) of Division C.

Check valve means a valve that permits flow in only one direction and prevents a return flow.

r₄ *Circuit vent* means a *vent pipe* that serves a number of *fixtures* and connects to the *fixture drain* of the most upstream *fixture*, and "*circuit vented*" has a corresponding meaning.

Class 1 fire sprinkler/standpipe system mean an assembly of pipes and fittings that conveys water from the *water service pipe* or *fire service main* to the sprinkler/standpipe system's outlets, is *directly connected* to the public water supply main only, has no pumps or reservoirs and in which the sprinkler drains discharge to the atmosphere, to dry wells or to other safe outlets.

Class 2 fire sprinkler/standpipe system means a *Class 1 fire sprinkler/standpipe system* that includes a booster pump in its connection to the public water supply main.

Class 3 fire sprinkler/standpipe system means an assembly of pipes and fittings that conveys *potable* water from the *water service pipe* or *fire service main* to the sprinkler/standpipe system's outlets and that is *directly connected* to the public water supply main and to one or more of the following storage facilities, which are filled from the public water supply main only: elevated water storage, fire pumps supplying water from aboveground covered reservoirs or pressure tanks.

Class 4 fire sprinkler/standpipe system means an assembly of pipes and fittings that conveys water from the *water service pipe* or *fire service main* to the sprinkler/standpipe system's outlets and is *directly connected* to the public water supply main (similar to *Class 1* and *Class 2 fire sprinkler/standpipe systems*) and to an auxiliary water supply dedicated to fire department use that is located within 520 m of a pumper connection.

Class 5 fire sprinkler/standpipe system means an assembly of pipes and fittings that conveys water from the *water service pipe* or *fire service main* to the sprinkler/standpipe system's outlets, is *directly connected* to the public water supply main and is interconnected with an *auxiliary water supply*.

Class 6 fire sprinkler/standpipe system means an assembly of pipes and fittings that conveys water from the *water service pipe* or *fire service main* to the sprinkler/standpipe system's outlets and acts as a combined industrial water supply and fire protection system that is supplied from the public water supply main only, with or without gravity storage or pump suction tanks.

Cleanout means a fitting access in a *drainage system* or *venting system* that is installed to provide access for cleaning and inspection and that is provided with a readily replaceable air tight cover.

Clear water waste means waste water containing no impurities or contaminants that are harmful to a person's health, plant or animal life or that impair the quality of the natural environment.

Combustible means that a material fails to meet the acceptance criteria of CAN4-S114, "Standard Method of Test for Determination of Non-Combustibility in Building Materials".

Combustible construction means a type of construction that does not meet the requirements for *noncombustible construction*.

Compliance alternative means a substitute for a requirement in another Part of Division B that is listed in Part 10 or 11 of Division B, and "*C.A.*" has a corresponding meaning.

Construction index means a level on a scale of 1 to 8 determined in accordance with Table 11.2.1.1.A. of Division B designating the expected *performance level* of the *building* structure with respect to the type of *construction* and fire protection of an existing *building*, and "*C.I.*" has a corresponding meaning.

Continuous vent means a *vent pipe* that is an extension of a vertical section of a *branch* of *fixture drain*.

Critical level means the level of submergence at which a *back-siphonage preventer* ceases to prevent *back-siphonage*.

Dead end means a pipe that terminates with a closed fitting.

Design activities means the activities described in subsection 15.11(5) of the Act.

Designer means the person responsible for the design.

Detention occupancy (Group B, Division 1) means an *occupancy* in which persons are under restraint or are incapable of self preservation because of security measures not under their control.

Developed length means, when applied to a pipe and fittings, the length along the centre line of the pipe and fittings.

Directly connected means physically connected in such a way that neither water nor gas can escape from the connection.

Distributing pipe means a pipe or piping in a *water distribution system.*

Drainage system means an assembly of pipes, fittings, *fixtures* and appurtenances on a property that is used to convey *sewage* and *clear water waste* to a main sewer or a *private sewage disposal system*, and includes a *private sewer*, but does not include *subsoil drainage piping*. (See *sanitary drainage system* and *storm drainage system*)

Drinking-water system has the same meaning as in subsection 2(1) of the *Safe Drinking Water Act, 2002.*

Drum trap means a *trap* whose inlet and outlet are in the sides of the cylindrical body of the *trap*.

r₁ *Dual vent* means a *vent pipe* that serves two *fixtures* and connects at the junction of the *trap arms*.

Dwelling unit means a *suite* operated as a housekeeping unit, used or intended to be used as a domicile by one or more persons and usually containing cooking, eating, living, sleeping and sanitary facilities.

Farm building means all or part of a *building*,
- (a) that does not contain any area used for *residential occupancy*,
- (b) that is associated with and located on land devoted to the practice of farming, and
- (c) that is used essentially for the housing of equipment or livestock or the production, storage or processing of agricultural and horticultural produce or feeds.

Fire separation means a construction assembly that acts as a barrier against the spread of fire.

Fire service main means a pipe and its appurtenances that are connected to a source of water and that are located on a property,
- (a) between the source of water and the base of the riser of a water-based fire protection system,
- (b) between the source of water and inlets to foam making systems,
- (c) between the source of water and the base elbow of private hydrants or monitor nozzles,

(d) as fire pump suction and discharge piping not within a *building*, or
(e) beginning at the inlet side of the check valve on a gravity or pressure tank.

Fixture means a receptacle, *plumbing appliance*, apparatus or other device that discharges *sewage* or *clear water waste*, and includes a floor drain.

Fixture drain means the pipe that connects a *trap* serving a *fixture* to another part of a *drainage system*.

Fixture outlet pipe means a pipe that connects the waste opening of a *fixture* to the *trap* serving the *fixture*.

Fixture unit means, when applied to a *drainage system*, the unit of measure based on the rate of discharge, time of operation and frequency of use of a *fixture* that expresses the hydraulic load that is imposed by that *fixture* on the *drainage system*.

Fixture unit means, when applied to a *water distribution system*, the unit of measure based on the rate of supply, time of operation and frequency of use of a *fixture* or outlet that expresses the hydraulic load that is imposed by that *fixture* or outlet on the supply system.

Flame-spread rating means an index or classification indicating the extent of the spread of flame on the surface of a material or an assembly of materials, as determined in a standard fire test prescribed in this Code.

Flood level rim means the top edge at which water can overflow from a *fixture* or device.

Flow control roof drain means a *roof drain* that restricts the flow of *storm water* into the *storm drainage system*.

Flue means an enclosed passageway for conveying *flue* gases.

Food premises means a *floor area* where food or drink for human consumption, or an ingredient of food or drink for human consumption, is manufactured, processed, prepared, stored, displayed, handled, served, distributed, sold or offered for sale, but does not include,
(a) a private residence,
(b) a boarding house that provides meals for fewer than ten boarders,

(c) a *building* to which Regulation 554 of the Revised Regulations of Ontario, 1990 (Camps in Unorganized Territory) or 568 of the Revised Regulations of Ontario, 1990 (Recreational Camps), made under the *Health Protection and Promotion Act*, applies,

(d) a plant, as defined in the *Milk Act*, that is required to be operated under the authority of a licence issued under that Act;

(e) premises where a licensed activity, as defined in the *Food Safety and Quality Act, 2001*, is carried on by a person who is required to hold a licence issued under that Act,

(f) an egg-grading station or a processed egg station that is required to be operated under the authority of a licence issued under the *Livestock and Livestock Products Act*,

(g) a *floor area* occupied by a church, service club or fraternal organization for the purpose of,

  (i) preparing meals for special events for its members and personally invited guests, or

  (ii) conducting bake sales, or

(h) a *farm building*.

Force main means a *sanitary drainage pipe* through which *sanitary sewage* is conveyed by mechanical or pneumatic propulsion.

Fresh air inlet means a *vent pipe* that is installed in conjunction with a *building trap* and terminates in *open air*.

Functional statement means a function set out in Table 3.2.1.1. that a *building* or an element of a *building* is intended to perform.

Greywater means *sanitary sewage* of domestic origin that is derived from *fixtures* other than *sanitary units*.

Gross area means the total area of all floors above grade measured between the outside surfaces of exterior walls or between the outside surfaces of exterior walls and the centre line of *firewalls*, except that, in any other *occupancy* than a *residential occupancy*, where an access or a *building* service penetrates a *firewall*, measurements shall not be taken to the centre line of such *firewall*.

Hazard index means a level on a scale of 1 to 8 determined in accordance with Tables 11.2.1.1.B. to 11.2.1.1.N. of Division B, designating the life safety hazard to occupants of a *building* based on,

(a) use and *occupancy*,

(b) *occupant load*,

(c) the use and function of floor spaces,

(d) the difficulty of egress,
(e) the fire load of contents, finishes and furnishings,
(f) the configuration or compartmentation of floor spaces, and
(g) the size of the *building*,

and "*H.I.*" has a corresponding meaning.

Header means a *vent pipe* that connects two or more *vent stacks* or *stack vents* to *open air*.

Heritage building means a *building*,
(a) that is designated under the *Ontario Heritage Act*, or
(b) that is certified to be of significant architectural or historical value by a recognized, non-profit public organization whose primary object is the preservation of structures of architectural or historical significance and the certification has been accepted by the *chief building official*.

Horizontal branch means that part of a *waste pipe* that is horizontal and installed to convey the discharge from more than one *fixture*.

Hub drain means a drain opening for indirect liquid wastes,
(a) that does not serve as a floor drain,
(b) that has the same pipe *size*, material and venting requirements as a floor drain,
(c) that has a *flood level rim* above the floor in which it is installed, and
(d) that receives wastes that are discharged directly into the drain opening.

Indirect service water heater means a *service water heater* that derives its heat from a heating medium such as warm air, steam or hot water.

Indirectly connected means not *directly connected*.

r_4 *Individual vent* means a *vent pipe* that serves one *fixture*.

Industrial occupancy means the *occupancy* or use of a *building* or part of a *building* for the assembling, fabricating, manufacturing, processing, repairing or storing of goods or materials.

Interceptor means a receptacle that is designed and installed to prevent oil, grease, sand or other materials from passing into a *drainage system*.

Leader means a pipe that is installed to carry storm water from a roof to a *storm building drain*, sewer or other place of disposal.

Listed means equipment or materials included in a list published by a certification organization accredited by the Standards Council of Canada.

Major occupancy means the principal *occupancy* for which a *building* or part of a *building* is used or intended to be used, and is deemed to include the subsidiary *occupancies* that are an integral part of the principal *occupancy*.

Mercantile occupancy means the *occupancy* or use of a *building* or part of a *building* for the displaying or selling of retail goods, wares or merchandise.

Mezzanine means an intermediate floor assembly between the floor and ceiling of any room or *storey* and includes an interior balcony.

Modified stack venting means a *stack venting* arrangement in which the *stack vent* above the connection of the highest *stack vented fixture* is reduced in diameter.

Municipal drinking-water system has the same meaning as in subsection 2(1) of the *Safe Drinking Water Act, 2002*.

Nominally horizontal means at an angle of less than 45° with the horizontal.

Nominally vertical means at an angle of not more than 45° with the vertical.

Noncombustible means that a material meets the acceptance criteria of CAN4-S114, "Standard Method of Test for Determination of Non-Combustibility in Building Materials".

Noncombustible construction means a type of construction in which a degree of fire safety is attained by the use of *noncombustible* materials for structural members and other building assemblies.

Objective means an objective set out in Article 2.2.1.1.

Occupancy means the use or intended use of a *building* or part of a *building* for the shelter or support of persons, animals or property.

Occupant load means the number of persons for which a *building* or part of a *building* is designed.

Offset means the piping that connects the ends of two pipes that are parallel.

Offset relief vent means a *relief vent* that provides additional air circulation upstream and downstream of an *offset* in a *soil* or *waste stack*.

Open air means the atmosphere outside a *building*.

Performance level means the level of performance under which all or part of an existing *building* functions with respect to its *building systems*.

Pharmacy means the premises in a *building* or the part of the premises in which prescriptions are compounded and dispensed for the public or in which drugs are sold by retail.

Plumbing appliance means a receptacle or equipment that receives or collects water, liquids or *sewage* and discharges water, liquid or *sewage* directly or indirectly to a *plumbing system*.

Plumbing system means a system of connected piping, fittings, valves, equipment, *fixtures* and appurtenances contained in *plumbing*. (See Appendix A.)

Point of entry treatment unit has the same meaning as in Subsection 1(1) of Ontario Regulation 170/03 (Drinking-Water Systems) made under the *Safe Drinking Water Act, 2002*.

Potable means fit for human consumption.

Potable water system means the *plumbing* that conveys *potable* water.

Private sewage disposal system means a *sewage system* or a *sewage works* that is not owned and operated by the Crown, a municipality or an organization acceptable to the Director responsible for issuing a Certificate of Approval under the *Ontario Water Resources Act*.

Private sewer means a sewer other than a *building sewer* that,

(a) is not owned or operated by a municipality, the Ministry of Environment or another public agency,

(b) receives drainage from more than one *sanitary building drain* either directly or through more than one *sanitary building sewer* or receives drainage from more than one *storm building drain* either directly or through one or more *storm building sewers*, and connects to a main sewer, or

(c) serves as a place of disposal on the property,

but does not include,

(d) a sewer that carries only the sanitary waste or *storm sewage* from two semi-detached dwelling units,
(e) a sewer that carries only the sanitary waste or *storm sewage* from one main *building* that is of *industrial*, commercial or *care or detention occupancy* and one ancillary *building*, or
(f) a sewer that carries only the sanitary waste or *storm sewage* from a row housing complex having five or fewer single family residences.

Private water supply means piping that serves as a source of supply on the property to more than one *water service pipe*.

Private water supply system means an assembly of pipes, fittings, valves, equipment and appurtenances that supplies water from a private source to a *potable water system*.

Professional engineer means, for the purposes of the Act and this Code, a person who holds a licence or a temporary licence under the *Professional Engineers Act*.

Public use means, when applied to plumbing *fixtures*, *fixtures* in general washrooms of schools, gymnasiums, hotels, bars, public comfort stations and other installations in which *fixtures* are installed so that their use is unrestricted.

Recreational camp means a camp for recreational activities consisting of one or more *buildings* or other structures established or maintained as living quarters, with or without charge, for the temporary *occupancy* of 10 or more persons for five or more days.

Relief vent means a *vent pipe* that is used in conjunction with a *circuit vent* to provide additional air circulation between a *drainage system* and a *venting system*.

r_1 *Residential full flow-through fire sprinkler/standpipe system* means an assembly of pipes and fittings installed in the residential portions of a *building* containing one or two *dwelling units* that conveys water from the *water service pipe* to outlets in the sprinkler and standpipe systems and is fully integrated into the *potable water system* to ensure a regular flow of water through all parts of the sprinkler and standpipe systems.

Residential occupancy means the *occupancy* or use of a *building* or part of a *building* by persons for whom sleeping accommodation is provided but who are not harboured or detained there to receive medical care or treatment or who are not involuntarily detained there.

r1 *Residential partial flow-through sprinkler/standpipe system* means an assembly of pipes and fittings installed in the residential portions of a *building* containing one or two *dwelling units* that conveys water from the *water service pipe* to outlets in the sprinkler and standpipe systems and in which flow occurs during inactive periods of the sprinkler and standpipe systems only through the main header to the water closet located at the farthest point of the sprinkler and standpipe systems.

Riser means a water *distributing pipe* that extends through at least one full *storey*, as defined in Part 7 of Division B.

Roof drain means a fitting or device that is installed in the roof to permit *storm sewage* to discharge into a *leader*.

Roof gutter means an exterior channel installed at the base of a sloped roof to convey *storm sewage*.

Sanitary building drain means a *building drain* that conducts *sewage* to a *building sewer* from the most upstream *soil* or *waste stack*, *branch* or *fixture drain* serving a water closet.

Sanitary building sewer means a pipe that is connected to a *sanitary building drain* 1 000 mm outside a wall of a *building* and that conducts *sewage* to a public sewer or *private sewage disposal system*.

Sanitary drainage pipe means all piping that conveys *sanitary sewage* to a place of disposal, including the *sanitary building drain*, *sanitary building sewer*, *soil pipe*, *soil stack*, *waste stack* and *waste pipe* but not the main sewer or piping in a *sewage* treatment plant.

Sanitary drainage system means a *drainage system* that conducts *sanitary sewage*.

Sanitary sewage means liquid or water borne waste,
 (a) of industrial or commercial origin, or
 (b) of domestic origin, including human body waste, toilet or other bathroom waste, and shower, tub, culinary, sink and laundry waste.

Sanitary sewer means a sewer that conducts *sewage*.

Sanitary unit means a water closet, urinal, bidet or bedpan washer.

Service water heater means a device for heating water for *plumbing* services.

Sewage means *sanitary sewage* or *storm sewage*.

Sewage system means,

(a) a chemical toilet, an incinerating toilet, a recirculating toilet, a self-contained portable toilet and all forms of privy including a *portable privy*, an *earth pit privy*, a *pail privy*, a *privy vault* and a composting toilet system,
(b) a *greywater* system,
(c) a cesspool,
(d) a *leaching bed* system, or
(e) a system that requires or uses a *holding tank* for the retention of *hauled sewage* at the site where it is produced before its collection by a *hauled sewage system*,

where these,

(f) have a *design capacity* of 10,000 litres per day or less,
(g) have, in total, a *design capacity* of 10,000 litres per day or less, where more than one of these are located on a lot or parcel of land, and
(h) are located wholly within the boundaries of the lot or parcel of land on which is located the *building* or *buildings* they serve.

Sewage works means sewage works as defined in subsection 1(1) of the *Ontario Water Resources Act*.

Size means the nominal diameter by which a pipe, fitting, *trap* or other similar item is commercially designated.

Soil pipe means a *sanitary drainage pipe* that carries the discharge of a *sanitary unit*, with or without the discharge, from any other *fixture*.

Soil stack means a vertical *soil pipe* that passes through one or more *storeys* and includes any *offset* that is part of the stack.

Sprinklered means equipped with a system of automatic sprinklers.

Stack vent means a *vent pipe* that connects the top of a *soil stack* or *waste stack* to a *header* or *open air* and "*stack vented*" has a corresponding meaning.

Stack venting means, when used with reference to *fixtures*, an arrangement such that the connections of the drainage piping from the *stack vented fixtures* to the stack provide venting to the *fixture traps* so that no additional *vent pipe* is required.

Storage-type service water heater means a *service water heater* with an integral hot water storage tank.

Storey means, except for the purposes of Part 7 of Division B, the portion of a *building*,

(a) that is situated between the top of any floor and the top of the floor next above it, or
(b) that is situated between the top of the floor and the ceiling above the floor, if there is no floor above it.

Storm building drain means a *building drain* that conducts storm water and is connected at its upstream end to a leader, sump or catch basin, and at its downstream end to a *building sewer* or a designated storm water disposal location.

Storm building sewer means a *building sewer* that conveys *storm sewage* to a place of disposal and commences 1 000 mm from the *building*.

Storm drainage pipe means all the connected piping that conveys *storm sewage* to a place of disposal and includes the *storm building drain*, *storm building sewer*, rain water *leader*, catch basin and area drain installed to collect water from the property and the piping that drains water from a swimming pool or from water cooled *air-conditioning* equipment, but does not include,

(a) a main *storm sewer*,
(b) a *subsoil drainage pipe*, or
(c) a private sewage treatment and disposal facility designed for the treatment or retention of *storm sewage* prior to discharge to the natural environment.

Storm drainage system means a *drainage system* that conveys *storm sewage*.

Storm sewage means water that is discharged from a surface as a result of rainfall, snow melt or snowfall.

Storm sewer means a sewer that conveys *storm sewage*.

Subsoil drainage pipe means a pipe that is installed underground to intercept and convey subsurface water, and includes foundation drain pipes.

Suite means a single room or series of rooms of complementary use, operated under a single tenancy, and includes,

(a) *dwelling units*,

e_1 (b) individual guest rooms in motels, hotels, boarding houses, rooming houses and dormitories, and

(c) individual stores and individual or complementary rooms for *business and personal services occupancies*.

Theatre means a place of public assembly intended for the production and viewing of the performing arts or the screening and viewing of motion pictures, and consisting of an auditorium with permanently fixed seats intended solely for a viewing audience.

Trap means a fitting or device that is designed to hold a liquid seal that will prevent the passage of gas but will not materially affect the flow of a liquid.

Trap arm means that portion of a *fixture drain* between the *trap weir* and the *vent pipe* fitting.

Trap dip means the lowest part of the upper interior surface of a *trap*.

Trap seal depth means the vertical distance between the *trap dip* and the *trap weir*.

Trap standard means the *trap* for a *fixture* that is integral with the support for the *fixture*.

Trap weir means the highest part of the lower interior surface of a *trap*.

Tribunal means the License Appeal Tribunal established under the *Licence Appeal Tribunal Act, 1999*.

Vacuum breaker means *back-siphonage preventer*.

Vent pipe means a pipe that is part of a *venting system*.

Vent stack means a *vent pipe* that is connected at its upper end to a *header* or is terminated in *open air* and that is used to limit pressure differential in a *soil* or *waste stack*.

Venting system means an assembly of pipes and fittings that connects a *drainage system* with *open air* for circulation of air and the protection of *trap* seals in the *drainage system*.

Vertical leg means the vertical portion of a *fixture* drain and includes the portion of a drain from the outlet of a water closet bowl to the point where the connecting piping changes to horizontal.

Waste pipe means a *sanitary drainage pipe* that carries the discharge from a *fixture* directly to a *waste stack*, *soil stack*, *sanitary building drain*, *branch* or *sewage* system.

Waste stack means a vertical *waste pipe* that passes through one or more *storeys* and includes any offset that is part of the stack that conducts liquid waste from *fixtures* other than *sanitary units*.

Water distribution system means an assembly of pipes, fittings, valves and appurtenances that conveys *potable water* to water supply outlets, *fixtures*, *plumbing appliances* and devices from the *water service pipe* or from a *point of entry treatment unit* located in the *building*.

Water purveyor means the owner or operator of a *drinking-water system*.

Water service pipe means a pipe on the property that conveys *potable* water from a *drinking-water system* or a *private water supply* to the inside of the *building*.

Water system means a *water service pipe*, a *private water supply*, a *water distribution system*, a *fire service main* or any part of any of them.

Wet vent means a *waste pipe* that also serves as a *vent pipe*.

Yoke vent means a *vent pipe* that is connected at its lower end to a *soil* or *waste stack* and at its upper end to a *vent stack* or a *branch vent* that is connected to a *vent stack*.

1.4.1.3. Definition of Applicable Law

(1) For the purposes of section 8 of the Act, *applicable law* means,

(a) the statutory requirements in the following provisions with respect to the following matters:

- (i) section 5 of the *Charitable Institutions Act*, with respect to the approval by the Minister of the site and plans for a new *building* or an addition to an existing *building* used or to be used as a charitable institution,
- r_1 (i.1) section 114 of the *City of Toronto Act, 2006* with respect to the approval by the City of Toronto or the Ontario Municipal Board of plans and drawings,
- (ii) section 5 of Regulation 262 of the Revised Regulations of Ontario, 1990 (General), made under the *Day Nurseries Act*, with respect to the approval of plans for a new *building* to be erected or an existing *building* to be used, altered or renovated for use as a day nursery or for alterations or renovations to be made to premises used by a day nursery,
- (iii) section 194 of the *Education Act*, with respect to the approval of the Minister for the *demolition* of a *building*,
- (iv) section 6 of Regulation 314 of the Revised Regulations of Ontario, 1990 (General), made under the *Elderly Persons Centres Act*, with respect to the approval of the Minister for the *construction* of a *building* project,
- (v) section 5 of the *Environmental Assessment Act* with respect to the approval of the Minister or the Environmental Review Tribunal to proceed with an undertaking,
- (vi) section 46 of the *Environmental Protection Act* with respect to the approval of the Minister to use land or land covered by water that has been used for the disposal of waste,
- r_3 (vi.1) section 47.3 of the *Environmental Protection Act*, with respect to the issuance of a renewable energy approval,
- (vii) section 168.3.1 of the *Environmental Protection Act* with respect to the *construction* of a *building* to be used in connection with a change of use of a property,
- (viii) paragraph 2 of subsection 168.6(1) of the *Environmental Protection Act* if a certificate of property use has been issued in respect of the property under subsection 168.6(1) of that Act,
- (ix) section 9 of Regulation 469 of the Revised Regulations of Ontario, 1990 (Equipment and Premises), made under the *Funeral Directors and Establishments Act*, with respect to the provision to the Registrar of architectural plans or drawings of the proposed *construction* or alteration of a funeral establishment,

(x) section 14 of the *Homes for the Aged and Rest Homes Act* with respect to the approval of the Minister for the erection or alteration of a *building* for use as a home or a joint home,

(xi) section 14 of the *Milk Act* with respect to the permit from the Director for the *construction* or alteration of any *building* intended for use as a plant,

(xii) section 4 of Regulation 832 of the Revised Regulations of Ontario, 1990 (General), made under the *Nursing Homes Act*, with respect to the provision to the Director of plans and specifications and such information and other material as may be required by the Director in respect of the *construction*, alteration, addition to or renovation of a nursing home or conversion of an existing *building* into a nursing home,

(xiii) section 11.1 of Ontario Regulation 267/03 (General) made under the *Nutrient Management Act, 2002* with respect to a proposed *building* or structure to house farm animals or store nutrients if that regulation requires the preparation and approval of a nutrient management strategy before *construction* of the proposed *building* or structure,

(xiv) subsection 30(2) of the *Ontario Heritage Act* with respect to a consent of the council of a *municipality* to the alteration or *demolition* of a *building* where the council of the *municipality* has given a notice of intent to designate the *building* under subsection 29(3) of that Act,

r₁ (xv) section 33 of the *Ontario Heritage Act* with respect to the consent of the council of a *municipality* for the alteration of property,

r₁ (xvi) section 34 of the *Ontario Heritage Act* with respect to the consent of the council of a *municipality* for the *demolition* of a *building*,

(xvii) section 34.5 of the *Ontario Heritage Act* with respect to the consent of the Minister to the alteration or *demolition* of a designated *building*,

e₁ (xviii) subsection 34.7(2) of the *Ontario Heritage Act* with respect to a consent of the Minister to the alteration or *demolition* of a *building* where the Minister has given a notice of intent to designate the *building* under section 34.6 of that Act,

r₁ (xix) section 42 of the *Ontario Heritage Act* with respect to the permit given by the council of a *municipality* for the erection, alteration or *demolition* of a *building*,

(xx) section 14 of the *Ontario Planning and Development Act, 1994* with respect to any conflict between a development plan made under that Act and a zoning by-law that affects the proposed *building* or structure,

r_1 (xxi) section 41 of the *Planning Act* with respect to the approval by the council of the *municipality* or the Municipal Board of plans and drawings,

r_1 (xxi.1) Section 42 of the *Planning Act* with respect to the payment of money or making arrangements satisfactory to the council of a *municipality* for the payment of money, where the payment is required under subsection 42(6) of that Act,

(xxii) section 2 of Ontario Regulation 453/96 (Work Permit — Construction), made under the *Public Lands Act*, with respect to the work permit authorizing the *construction* or placement of a *building* on public land,

e_1 (xxiii) Section 34 or 38 of the *Public Transportation and Highway Improvement Act* with respect to the permit from the Minister for the placement, erection or alteration of any *building* or other structure or the use of land,

(b) the following provisions of Acts and regulations:

r_1 (0.i) subsection 102(3) of the *City of Toronto Act, 2006*,

(i) sections 28 and 53 of the *Development Charges Act, 1997*,

(ii) sections 257.83 and 257.93 of the *Education Act*,

(iii) subsection 5(4) of the *Environmental Assessment Act*,

(iv) subsection 133(4) of the *Municipal Act, 2001*,

(v) subsection 24(3) of the *Niagara Escarpment Planning and Development Act*,

(vi) subsections 4(3) and (5) of Regulation 832 of the Revised Regulations of Ontario, 1990 (General), made under the *Nursing Homes Act*,

(vi.1) subsection 27(3) of the *Ontario Heritage Act*,

(vii) section 46 of the *Planning Act*,

(viii) section 33 of the *Planning Act* except where, in the case of the *demolition* of a residential property, a permit to *demolish* the property is obtained under that section,

(c) regulations made by a conservation authority under clause 28(1)(c) of the *Conservation Authorities Act* with respect to permission of the authority for the *construction* of a *building* or structure if, in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development,

r_4 (c.1) by-laws made under section 108 of the *City of Toronto Act, 2006*, but only with respect to the issuance of a permit for the *construction* of a green roof if the *construction* of the roof is prohibited unless a permit is obtained,

(d) by-laws made under section 40.1 of the *Ontario Heritage Act*,

r_1 (e) by-laws made under section 34 or 38 of the *Planning Act*, r₁ (e.1) subject to Clause (e.2), by-laws made under Ontario Regulation 608/06 (Development Permits) made under the *Planning Act*,

r₁ (e.2) by-laws referred to in Clause (e.1) in relation to the development of land, but only with respect to the issuance of a development permit if the development of land is prohibited unless a development permit is obtained,

r₁ (e.3) by-laws made under Ontario Regulation 246/01 (Development Permits) made under the *Planning Act* which continue in force despite the revocation of that regulation by reason of section 17 of Ontario Regulation 608/06 (Development Permits) made under that Act,

(f) orders made by the Minister under section 47 of the *Planning Act* or subsection 17(1) of the *Ontario Planning and Development Act, 1994*, and

(g) by-laws made under any private Act that prohibit the proposed *construction* or *demolition* of the *building* unless the by-law is complied with.

(2) For the purposes of clause 10(2)(a) of the Act, *applicable law* means any general or special Act, and all regulations and by-laws enacted under them that prohibit the proposed use of the *building* unless the Act, regulation or by-law is complied with.

1.4.2. Symbols and Other Abbreviations

1.4.2.1. Symbols and Other Abbreviations

(1) In this Code, a symbol or abbreviation listed in Column 1 of Table 1.4.2.1. shall have the meaning listed opposite it in Column 2.

Table 1.4.2.1.
Symbols and Abbreviations

Forming Part of Sentence 1.4.2.1.(1)

	Item	Symbol or Abbreviation	Meaning
	1	1 in 2	slope of 1 vertical to 2 horizontal
	2	ABS	acrylonitrile-butadiene-styrene
	3	BOD$_5$	the five day biochemical oxygen demand
	4	CBOD$_5$	the five day carbonaceous biochemical oxygen demand
	5	cm	centimetre(s)
	6	cm^2	square centimetre(s)
	7	CPVC	chlorinated poly (vinyl chloride)
r$_4$	8	dB(A)	A-weighted sound level
	9	°	degree(s)
	10	°C	degree(s) Celsius
	11	diam	diameter
	12	DWV	drain, waste and vent
	13	ft	foot (feet)
	14	g	gram(s)
	15	ga	gauge
	16	gal	imperial gallon(s)
	17	gal/min	imperial gallon(s) per minute
	18	h	hour(s)
	19	HVAC	heating, ventilating and air-conditioning
	20	Hz	hertz
e$_1$	21	in.	inch(es)
	22	J	joule(s)
	23	kg	kilogram(s)
	24	kg/m^2	kilograms per square metre
	25	kN	kilonewton(s)
	26	kPa	kilopascal(s)
	27	kW	kilowatt(s)
	28	L	litre(s)
	29	L/s	litre(s) per second
	30	lx	lux
e$_3$		Col. 1	2

Table 1.4.2.1. (Cont'd)
Symbols and Abbreviations
Forming Part of Sentence 1.4.2.1.(1)

	Item	Symbol or Abbreviation	Meaning
	31	m	metre(s)
	32	m^2	square metre(s)
	33	m/s	metre(s) per second
	34	max.	maximum
	35	mg/L	milligram(s) per litre
	36	min	minute(s)
r_4	36.1	min.	minimum
	37	MJ	megajoule(s)
	38	mm	millimetre(s)
	39	MPa	megapascal(s)
	40	N	newton
	41	N/A	not applicable
	42	ng	nanogram(s)
	43	No.	number(s)
	44	nom.	nominal
	45	o.c.	on centre
	46	OSB	oriented strandboard
	47	Pa	pascal(s)
	48	PB	polybutylene
	49	PE	polyethylene
	50	PE/AL/PE	polyethylene/aluminum/polyethylene
r_4	51	PEX	crosslinked polyethylene
	52	PEX/AL/PEX	crosslinked polyethylene/aluminum/crosslinked polyethylene
	53	PVC	poly (vinyl chloride)
	54	RSI	thermal resistance, International System of Units
	55	s	second(s)
	56	temp.	temperature
	57	T&G	tongue and groove
	58	W	watt(s)
	59	wt	weight
	60	%	percent
e_3		Col. 1	2

Section 1.5. Referenced Documents and Organizations

1.5.1. Referenced Documents

1.5.1.1. Application of Referenced Documents

(1) The provisions of a referenced document in Divisions A and B apply only to the extent that the provisions relate to,

(a) *buildings*, and

(b) the *objectives* and *functional statements* attributed to the applicable *acceptable solutions* in Division B where the document is referenced.

1.5.1.2. Conflicting Requirements

(1) In the case of a conflict between the provisions of this Code and those of a referenced document, the provisions of this Code shall govern.

1.5.1.3. Applicable Editions

(1) Where documents are referenced in this Code, they shall be the editions designated in Subsection 1.3.1. of Division B.

1.5.2. Organizations

1.5.2.1. Abbreviations of Proper Names

(1) The abbreviations of proper names in this Code shall have the meanings assigned to them in Article 1.3.2.1. of Division B.

Part 2
Objectives

Section 2.1. Application
2.1.1. Application 3

Section 2.2. Objectives
2.2.1. Objectives 3

Part 2
Objectives

Section 2.1. Application

2.1.1. Application

2.1.1.1. Application of Objectives

(1) The *objectives* set out in Table 2.2.1.1. apply only to the extent that they relate to compliance with this Code as required in Article 1.2.1.1.

Section 2.2. Objectives

2.2.1. Objectives

2.2.1.1. Objectives

(1) The *objectives* of this Code shall be those set out in Table 2.2.1.1.

Table 2.2.1.1.
Objectives

Forming Part of Sentence 2.2.1.1.(1)

Category	Number	*Objective*
Safety	OS	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury.
Safety — Fire Safety	OS1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to fire.
	OS1.1	An *objective* of this Code is to limit the probability that, as a result of the design or construction of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to fire caused by a fire or explosion.
	OS1.2	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to fire caused by fire or explosion impacting areas beyond its point of origin.
	OS1.3	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to fire caused by the collapse of physical elements due to a fire or explosion.
	OS1.4	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to fire caused by fire safety systems failing to function as expected.
	OS1.5	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to fire caused by persons being delayed in or impeded from moving to a safe place during a fire emergency.
Column 1	2	3

Table 2.2.1.1. (Cont'd)
Objectives
Forming Part of Sentence 2.2.1.1.(1)

Category	Number	*Objective*
Safety — Structural Safety	OS2	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to structural failure.
	OS2.1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to structural failure caused by loads bearing on the *building* elements that exceed their load-bearing capacity.
	OS2.2	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to structural failure caused by loads bearing on the *building* that exceed the *loadbearing* properties of the supporting medium.
	OS2.3	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to structural failure caused by damage to or deterioration of *building* elements.
	OS2.4	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to structural failure caused by vibration or deflection of *building* elements.
	OS2.5	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to structural failure caused by instability of the *building* or part of it.
	OS2.6	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to structural failure caused by collapse of the *excavation*.
Column 1	2	3

Table 2.2.1.1. (Cont'd)
Objectives
Forming Part of Sentence 2.2.1.1.(1)

Category	Number	*Objective*
Safety — Safety in Use	OS3	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of the *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to hazards.
	OS3.1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to hazards caused by tripping, slipping, falling, contact, drowning or collision.
	OS3.2	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to hazards caused by contact with hot surfaces or substances.
	OS3.3	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to hazards caused by contact with energized equipment.
	OS3.4	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to hazards caused by exposure to hazardous substances.
	OS3.5	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to hazards caused by exposure to high levels of sound from fire alarm systems.
	OS3.6	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to hazards caused by persons becoming trapped in confined spaces.
	OS3.7	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of injury due to hazards caused by persons being delayed in or impeded from moving to a safe place during an emergency.
Column 1	2	3

Table 2.2.1.1. (Cont'd)
Objectives
Forming Part of Sentence 2.2.1.1.(1)

Category	Number	*Objective*
Safety — Resistance to Unwanted Entry	OS4	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of injury due to the *building's* low level of resistance to unwanted entry.
	OS4.1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of injury due to the *building's* low level of resistance to unwanted entry caused by intruders being able to force their way through locked doors or windows.
	OS4.2	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of injury due to the *building's* low level of resistance to unwanted entry caused by occupants being unable to identify potential intruders as such.
Health	OH	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person will be exposed to an unacceptable risk of illness.
Health — Indoor Conditions	OH1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to indoor conditions.
	OH1.1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to indoor conditions caused by inadequate indoor air quality.
	OH1.2	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to indoor conditions caused by inadequate thermal comfort.
	OH1.3	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to indoor conditions caused by contact with moisture.
Column 1	2	3

Table 2.2.1.1. (Cont'd)
Objectives
Forming Part of Sentence 2.2.1.1.(1)

Category	Number	*Objective*
Health — Sanitation	OH2	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in or adjacent to the *building* will be exposed to an unacceptable risk of illness due to unsanitary conditions.
	OH2.1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to unsanitary conditions caused by exposure to human or domestic waste.
	OH2.2	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to unsanitary conditions caused by consumption of contaminated water.
	OH2.3	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to unsanitary conditions caused by inadequate facilities for personal hygiene.
	OH2.4	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to unsanitary conditions caused by contact with contaminated surfaces.
	OH2.5	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to unsanitary conditions caused by contact with vermin and insects.
	OH2.6	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person adjacent to the *building* will be exposed to an unacceptable risk of illness due to unsanitary conditions caused by exposure to human or domestic waste.
Column 1	2	3

Table 2.2.1.1. (Cont'd)
Objectives
Forming Part of Sentence 2.2.1.1.(1)

Category	Number	*Objective*
Health — Noise Protection	OH3	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to high levels of sound originating in adjacent spaces in the *building*.
	OH3.1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to high levels of sound originating in adjacent spaces in the *building* caused by exposure to airborne sound transmitted through assemblies separating *dwelling units* from adjacent spaces in the *building*.
Health — Vibration and Deflection Limitation	OH4	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be exposed to an unacceptable risk of illness due to high levels of vibration or deflection of *building* elements.
Health — Hazardous Substances Containment	OH5	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, the public will be exposed to an unacceptable risk of illness due to the release of hazardous substances from the *building*.
Health — Privacy	OH6	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be provided with an unacceptable level of privacy.
Health — View To The Outdoors	OH7	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person in the *building* will be unable to experience a view to the outdoors.
Accessibility	OA	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person with a physical or sensory disability will be unacceptably impeded from accessing or using the *building* or its facilities.
Column 1	2	3

Table 2.2.1.1. (Cont'd)
Objectives
Forming Part of Sentence 2.2.1.1.(1)

Category	Number	*Objective*
Accessibility — Barrier-free Path of Travel	OA1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person with a physical or sensory disability will be unacceptably impeded from accessing the *building* or circulating within it.
Accessibility — Barrier-free Facilities	OA2	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a person with a physical or sensory disability will be unacceptably impeded from using the *building's* facilities.
Fire, Structural, Water and Sewage Protection of Buildings	OP	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, the *building* or adjacent *buildings* will be exposed to an unacceptable risk of damage due to fire or structural insufficiency, or the *building* or part of it will be exposed to an unacceptable risk of loss of use also due to structural insufficiency.
Fire, Structural, Water and Sewage Protection of Buildings — Fire Protection of the Building	OP1	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* will be exposed to an unacceptable risk of damage due to fire.
	OP1.1	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* will be exposed to an unacceptable risk of damage due to fire caused by fire or explosion occurring.
	OP1.2	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* will be exposed to an unacceptable risk of damage due to fire caused by fire or explosion impacting areas beyond its point of origin.
	OP1.3	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* will be exposed to an unacceptable risk of damage due to fire caused by collapse of physical elements due to a fire or explosion.
	OP1.4	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* will be exposed to an unacceptable risk of damage due to fire caused by fire safety systems failing to function as expected.
Column 1	2	3

Table 2.2.1.1. (Cont'd)
Objectives
Forming Part of Sentence 2.2.1.1.(1)

Category	Number	*Objective*
Fire, Structural, Water and Sewage Protection of Buildings — Structural Sufficiency of the Building	OP2	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* or part of it will be exposed to an unacceptable risk of damage or loss of use due to structural failure or lack of structural serviceability.
	OP2.1	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* or part of it will be exposed to an unacceptable risk of damage or loss of use due to structural failure or lack of structural serviceability caused by loads bearing on the *building* elements that exceed their *loadbearing* capacity.
	OP2.2	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* or part of it will be exposed to an unacceptable risk of damage or loss of use due to structural failure or lack of structural serviceability caused by loads bearing on the *building* that exceed the *loadbearing* properties of the supporting medium.
	OP2.3	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* or part of it will be exposed to an unacceptable risk of damage or loss of use due to structural failure or lack of structural serviceability caused by damage to or deterioration of *building* elements.
	OP2.4	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* or part of it will be exposed to an unacceptable risk of damage or loss of use due to structural failure or lack of structural serviceability caused by vibration or deflection of *building* elements.
	OP2.5	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* or part of it will be exposed to an unacceptable risk of damage or loss of use due to structural failure or lack of structural serviceability caused by instability of the *building* or part of it.
Column 1	2	3

Table 2.2.1.1. (Cont'd)
Objectives
Forming Part of Sentence 2.2.1.1.(1)

Category	Number	*Objective*
Fire, Structural, Water and Sewage Protection of Buildings — Structural Sufficiency of the Building	OP2.6	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* or part of it will be exposed to an unacceptable risk of damage or loss of use due to structural failure or lack of structural serviceability caused by instability or movement of the supporting medium.
Fire, Structural, Water and Sewage Protection of Buildings — Protection of Adjacent Buildings from Fire	OP3	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, adjacent *buildings* will be exposed to an unacceptable risk of damage due to fire.
	OP3.1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, adjacent *buildings* will be exposed to an unacceptable risk of damage due to fire caused by fire or explosion impacting areas beyond the building of origin.
Fire, Structural, Water and Sewage Protection of Buildings — Protection of Adjacent Buildings from Structural Damage	OP4	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, adjacent *buildings* will be exposed to an unacceptable risk of structural damage.
	OP4.1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, adjacent *buildings* will be exposed to an unacceptable risk of structural damage caused by settlement of the medium supporting adjacent *buildings*.
	OP4.2	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of the *building*, adjacent *buildings* will be exposed to an unacceptable risk of structural damage caused by collapse of the *building* or portion of it onto adjacent *buildings*.
	OP4.3	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, adjacent *buildings* will be exposed to an unacceptable risk of structural damage caused by impact of the *building* on adjacent *buildings*.
	OP4.4	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, adjacent *buildings* will be exposed to an unacceptable risk of structural damage caused by collapse of the *excavation*.
Column 1	2	3

Table 2.2.1.1. (Cont'd)
Objectives
Forming Part of Sentence 2.2.1.1.(1)

Category	Number	*Objective*
Fire, Structural, Water and Sewage Protection of Buildings — Water and Sewage Protection of Buildings and Facilities	OP5	An *objective* of this Code is to limit the probability that, as a result of its design or *construction*, a *building* will be exposed to unacceptable risk of damage due to leakage of service water or *sewage*.
Resource Conservation	OR	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a natural resource will exposed to an unacceptable risk of depletion or the capacity of the infrastructure supporting the use of the resource will be exposed to an unacceptable risk of being exceeded.
Resource Conservation — Water Conservation	OR1	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, water resources will be exposed to an unacceptable risk of depletion or the capacity of the water supply, treatment and disposal infrastructure will be exposed to an unacceptable risk of being exceeded, caused by the consumption of water.
Resource Conservation — Energy Conservation	OR2	An *objective* of this Code is to limit the probability that, as a result of the design or *construction* of a *building*, a natural resource will be exposed to an unacceptable risk of depletion or the capacity of the infrastructure supporting the use of the resource will be exposed to an unacceptable risk of being exceeded, caused by the consumption of energy.
Environmental Integrity	OE	An *objective* of this Code is to limit the probability that, as a result of the design, *construction* or operation of a *building*, the natural environment will be exposed to an unacceptable risk of degradation.
Conservation of Buildings	OC	An *objective* of this Code is to limit the probability that, as a result of the extension, material alteration or repair of an existing *building* or a change in use of an existing *building*, the existing *building* cannot be acceptably conserved.
Column 1	2	3

Part 3
Functional Statements

Section 3.1. Application
3.1.1. Application of Functional Statements 3

Section 3.2. Functional Statements
3.2.1. Functional Statements 3

Part 3
Functional Statements

Section 3.1. Application

3.1.1. Application

3.1.1.1. Application of Functional Statements

(1) The *functional statements* set out in Table 3.2.1.1. apply only to the extent that they relate to compliance with this Code as required in Article 1.2.1.1.

Section 3.2. Functional Statements

3.2.1. Functional Statements

3.2.1.1. Functional Statements

(1) The *functional statements* of this Code are those set out in Table 3.2.1.1.

Table 3.2.1.1.
Functional Statements
Forming Part of Sentence 3.2.1.1.(1)

Number	Function
F01	To minimize the risk of accidental ignition.
F02	To limit the severity and effects of fire or explosions.
F03	To retard the effects of fire on areas beyond its point of origin.
F04	To retard failure or collapse due to the effects of fire.
F05	To retard the effects of fire on emergency egress facilities.
F06	To retard the effects of fire on facilities for notification, suppression and emergency response.
F10	To facilitate the timely movement of persons to a safe place in an emergency.
F11	To notify persons, in a timely manner, of the need to take action in an emergency.
F12	To facilitate emergency response.
F13	To notify emergency responders, in a timely manner, of the need to take action in an emergency.
F20	To support and withstand expected loads and forces.
F21	To limit or accommodate dimensional change.
F22	To limit movement under expected loads and forces.
F23	To maintain equipment in place during structural movement.
F30	To minimize the risk of injury to persons as a result of tripping, slipping, falling, contact, drowning or collision.
F31	To minimize the risk of injury to persons as a result of contact with hot surfaces or substances.
F32	To minimize the risk of injury to persons as a result of contact with energized equipment.
F33	To limit the level of sound of a fire alarm system.
F34	To resist or discourage unwanted access or entry.
F35	To facilitate the identification of potential intruders.
F36	To minimize the risk that persons will be trapped in confined spaces.
Column 1	2

Table 3.2.1.1. (Cont'd)
Functional Statements
Forming Part of Sentence 3.2.1.1.(1)

Number	Function
F40	To limit the level of contaminants.
F41	To minimize the risk of generation of contaminants.
F42	To resist the entry of vermin and insects.
F43	To minimize the risk of release of hazardous substances.
F44	To limit the spread of hazardous substances beyond their point of release.
F45	To minimize the risk of the spread of diseases through communal shower facilities
F46	To minimize the risk of contamination of potable water.
F50	To provide air suitable for breathing.
F51	To maintain appropriate air and surface temperatures.
F52	To maintain appropriate relative humidity.
F53	To maintain appropriate indoor/outdoor air pressure differences.
F54	To limit drafts.
F55	To resist the transfer of air through environmental separators.
F56	To limit the transmission of airborne sound into a *dwelling unit* from spaces elsewhere in the *building*.
F60	To control the accumulation and pressure of water on and in the ground.
F61	To resist the ingress of precipitation, water or moisture from the exterior or from the ground.
F62	To facilitate the dissipation of water and moisture from the *building*.
F63	To limit moisture condensation.
F70	To provide *potable* water.
F71	To provide facilities for personal hygiene.
F72	To provide facilities for the sanitary disposal of human and domestic wastes.
F73	To facilitate access to and circulation in the *building* and its facilities by persons with physical or sensory disabilities.
F74	To facilitate the use of a *building's* facilities by persons with physical or sensory disabilities.
Column 1	2

Table 3.2.1.1. (Cont'd)
Functional Statements
Forming Part of Sentence 3.2.1.1.(1)

Number	Function
F80	To resist deterioration resulting from expected service conditions.
F81	To minimize the risk of malfunction, interference, damage, tampering, lack of use or misuse.
F82	To minimize the risk of inadequate performance due to improper maintenance or lack of maintenance.
F101	To limit unwanted visual exposure.
F102	To provide a view to the outdoors in *buildings*.
F110	To control the release of contaminants into *soil, groundwater, surface water* and air.
F111	To minimize the risk of malfunction, damage or failure of a *sewage system*.
F112	To provide adequate treatment of *sanitary sewage* and *effluent*.
F113	To minimize the risk of injury as a result of contact with *sanitary sewage* or partially treated *effluent*.
F120	To minimize the risk of injury to persons entering or exiting the pool, as a result of unfamiliarity with the pool.
F121	To minimize the risk of injury to persons using the pool, as a result of unfamiliarity with the pool.
F122	To minimize the risk of contamination of pool water.
F123	To facilitate timely response to incapacitated pool users.
F124	To minimize the risk of entrapment or injury to a person within the pool, as a result of water, air or vacuum action.
F130	To limit excessive water consumption.
F131	To limit excessive energy consumption.
F140	To facilitate the reuse and material alteration and repair of existing *buildings*.
Column 1	2

Division B
Acceptable Solutions

Part 1
General

Section 1.1. General

1.1.1. Application 3
1.1.2. Climatic Data 3

Section 1.2. Reserved

Section 1.3. Referenced Documents and Organizations

1.3.1. Referenced Documents 3
1.3.2. Abbreviations 10

Part 1
General

Section 1.1. General

1.1.1. Application

1.1.1.1. Application

(1) This Part applies to all *buildings* covered in this Code.

1.1.2. Climatic Data

1.1.2.1. Climatic and Seismic Design Values

(1) The climatic and seismic values required for the design of *buildings* under this Code shall be in conformance with the climatic and seismic values provided in Supplementary Standard SB-1.

(2) The outside winter design temperatures determined from Supplementary Standard SB-1 shall be those listed for the January 2.5% values.

1.1.2.2. Depth of Frost Penetration

(1) Depth of frost penetration shall be established on the basis of local experience.

Section 1.2. Reserved

Section 1.3. Referenced Documents and Organizations

1.3.1. Referenced Documents

1.3.1.1. Effective Date

r_4 **(1)** Unless otherwise specified in this Code, the documents referenced in this Code shall include all amendments, revisions and supplements effective to November 30, 2009.

1.3.1.2. Applicable Editions

(1) Where documents are referenced in this Code, they shall be the editions designated in Column 2 of Table 1.3.1.2.

Table 1.3.1.2.
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

	Issuing Agency	Document Number	Title of Document	Code Reference
m_5	ANSI/ASME	B16.3-2006	Malleable Iron Threaded Fittings, Classes 150 and 300	7.2.6.6.(1)
m_5	ANSI/ASME	B16.4-2006	Gray Iron Threaded Fittings, Classes 150 and 250	7.2.6.5.(1) Table 7.2.11.2.
	ANSI/ASME	B16.12-1998	Cast Iron Threaded Drainage Fittings	7.2.6.3.(1)
m_5	ANSI/ASME	B16.15-2006	Cast Bronze Threaded Fittings, Classes 125 and 250	7.2.7.3.(1)
e_2	ANSI/ASME	B16.18-2001	Cast Copper Alloy Solder Joint Pressure Fittings	7.2.7.6.(1) 7.2.7.6.(2) Table 7.2.11.2.
	ANSI/ASME	B16.22-2001	Wrought Copper and Copper Alloy Solder Joint Pressure Fittings	7.2.7.6.(1)
e_2	ANSI/ASME	B16.23-2002	Cast Copper Alloy Solder Joint Drainage Fittings: DWV	7.2.7.5.(1)
	ANSI/ASME	B16.24-2001	Cast Copper Alloy Pipe Flanges and Flanged Fittings: Classes 150, 300, 400, 600, 900, 1500 and 2500	7.2.7.2.(1)
m_5	ANSI/ASME	B16.26-2006	Cast Copper Alloy Fittings for Flared Copper Tubes	7.2.7.7.(1) 7.2.7.7.(2) Table 7.2.11.2.
	ANSI/ASME	B16.29-2001	Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV	7.2.7.5.(1)
m_2	ANSI/AWWA	C104 / A21.4-2003	Cement-Mortar Lining for Ductile-Iron Pipe Fittings for Water	7.2.6.4.(2) Table 7.2.11.2.
m_5	ANSI/AWWA	C110 / A21.10-2003	Ductile-Iron and Gray-Iron Fittings for Water	7.2.6.4.(3) Table 7.2.11.2.
m_5	ANSI/AWWA	C111 / A21.11-2007	Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings	7.2.6.4.(4) Table 7.2.11.2.
	ANSI/AWWA	C151 / A21.51-2002	Ductile-Iron Pipe, Centrifugally Cast, for Water	7.2.6.4.(1) Table 7.2.11.2
m_5	ANSI/CSA	ANSI Z21.22-1999 / CSA 4.4-M99	Relief Valves for Hot Water Supply Systems	7.2.10.11.(1)
m_5	ANSI/CSA	ANSI Z21.22a-2000 / CSA 4.4a-2000	Addenda 1 to ANSI Z21.22-1999 / CSA 4.4-M99, Relief Valves for Hot Water Supply Systems	7.2.10.11.(1)
m_5	ANSI/CSA	ANSI Z21.22b-2001 / CSA 4.4b-2001	Addenda 2 to ANSI Z21.22-1999 / CSA 4.4-M99, Relief Valves for Hot Water Supply Systems	7.2.10.11.(1)
	Column 1	2	3	4

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document	Code Reference
ASSE	1010-2004	Water Hammer Arresters	7.2.10.15.(1)
ASSE	1051-2002	Individual and Branch Type Air Admittance Valves for Sanitary Drainage Systems	7.2.10.16.(1)
m_5 ASTM	A53 / A53M-06a	Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless	7.2.6.7.(4)
ASTM	A518 / A518M-99	Corrosion-Resistant High-Silicon Iron Castings	7.2.8.1.(1)
m_5 ASTM	B32-04	Solder Metal	7.2.9.2.(2)
ASTM	B42-02e1	Seamless Copper Pipe, Standard Sizes	7.2.7.1.(1)
ASTM	B43-98e1	Seamless Red Brass Pipe, Standard Sizes	7.2.7.1.(2)
ASTM	B68-02	Seamless Copper Tube, Bright Annealed	7.2.7.4.(3)
ASTM	B88-03	Seamless Copper Water Tube	7.2.7.4.(1) Table 7.2.11.2.
ASTM	B306-02	Copper Drainage Tube (DWV)	7.2.7.4.(1)
ASTM	B813-00e1	Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy and Tube	7.2.9..2.(3)
ASTM	B828-02	Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings	7.3.2.4.(1)
ASTM	C1053-00	Borosilicate Glass Pipe and Fittings for Drain, Waste and Vent (DWV) Applications	7.2.8.1.(1)
ASTM	D3261-03	Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing	7.2.5.5.(3)
m_5 e_2 ASTM	F628-06e1	Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe With a Cellular Core	7.2.5.10.(1) 7.2.5.12.(1) 7.2.5.12.(2)
m_5 ASTM	F714-06a	Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter	7.2.5.6.(1)
r_1 CCBFC	NRCC 47666	National Building Code of Canada 2005	1.3.1.2.(3) of Division A 2.4.2.2.(1)(b)(iii) of Division C
r_1 CCBFC	NRCC 47668	National Plumbing Code of Canada 2005	2.4.2.2.(1)(b)(iii) of Division C
CGSB	CAN/CGSB-34.9-M94	Asbestos-Cement Sewer Pipe	7.2.5.1.(2)
CGSB	CAN/CGSB-34.22-94	Asbestos-Cement Drain Pipe	7.2.5.1.(1)
CGSB	CAN/CGSB-34.23-94	Asbestos-Cement House Connection Sewer Pipe	7.2.5.1.(2)
Column 1	2	3	4

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

Issuing Agency	Document Number	Title of Document	Code Reference
CSA	A60.1-M1976	Vitrified Clay Pipe	7.2.5.4.(1)
CSA	A60.3-M1976	Vitrified Clay Pipe Joints	7.2.5.4.(2)
CSA	A257 Series-03	Standards for Concrete Pipe and Manhole Sections	7.2.5.3.(1)
CSA	A257.4-03	Precast Reinforced Circular Concrete Manhole Sections, Catch Basins, and Fittings	7.2.5.3.(5)
m_5 e_2 CSA	ASME A17.1-2007/ CSA-B44-07	Safety Code for Elevators and Escalators	7.4.3.6.(1)
CSA	CAN/CSA-B45.0-02	General Requirements for Plumbing Fixtures	7.6.4.2.(1)
CSA	CAN/CSA-B45.1-02	Ceramic Plumbing Fixtures	7.2.2.2.(2)
CSA	CAN/CSA-B45.2-02	Enamelled Cast Iron Plumbing Fixtures	7.2.2.2.(3)
CSA	CAN/CSA-B45.3-02	Porcelain-Enamelled Steel Plumbing Fixtures	7.2.2.2.(4)
CSA	CAN/CSA-B45.4-02	Stainless Steel Plumbing Fixtures	7.2.2.2.(5)
CSA	CAN/CSA-B45.5-02	Plastic Plumbing Fixtures	7.2.2.2.(6)
CSA	CAN/CSA-B45.9-02	Macerating Systems and Related Components	7.2.2.2.(8)
CSA	CAN/CSA-B45.10-01	Hydromassage Bathtubs	7.2.2.2.(7)
CSA	CAN/CSA-B64.0-01	Definitions, General Requirements, and Test Methods for Vacuum Breakers and Backflow Preventers	7.2.10.10.(1)
CSA	CAN/CSA-B64.1.1-01	Vacuum Breakers, Atmospheric Type (AVB)	7.2.10.10.(1)
CSA	CAN/CSA-B64.1.2-01	Vacuum Breakers, Pressure Type (PVB)	7.2.10.10.(1)
CSA	CAN/CSA-B64.2-01	Vacuum Breakers, Hose Connection Type (HCVB)	7.2.10.10.(1)
CSA	CAN/CSA-B64.2.1-01	Vacuum Breakers, Hose Connection Type (HCVB) with Manual Draining Feature	7.2.10.10.(1)
CSA	CAN/CSA-B64.2.2-01	Vacuum Breakers, Hose Connection Type (HCVB) with Automatic Draining Feature	7.2.10.10.(1)
r_4 CSA	CAN/CSA-B64.3-01	Backflow Preventers, Dual Check Valve Type Atmospheric Port (DACP)	7.2.10.10.(1) 7.6.2.5.(4)
Column 1	2	3	4

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

	Issuing Agency	Document Number	Title of Document	Code Reference
e_2	CSA	CAN/CSA-B64.4-01	Backflow Preventers, Reduced Pressure Principle Type (RP)	7.2.10.10.(1)
	CSA	CAN/CSA-B64.4.1-01	Backflow Preventers, Reduced Pressure Principle Type for Fire Systems (RPF)	7.6.2.4.(2) Table 7.6.2.4.
	CSA	CAN/CSA-B64.5-01	Backflow Preventers, Double Check Valve Type (DCVA)	7.2.10.10.(1)
	CSA	CAN/CSA-B64.5.1-01	Backflow Preventers, Double Check Valve Type for Fire Systems (DCVAF)	7.6.2.4.(2) Table 7.6.2.4.
	CSA	CAN/CSA-B64.6-01	Backflow Preventers, Dual Check Valve Type (DuC)	7.2.10.10.(1)
	CSA	CAN/CSA-B64.6.1-01	Backflow Preventers, Dual Check Valve Type for Fire Systems (DuCF)	7.6.4.2.(2) Table 7.6.2.4.
	CSA	CAN/CSA-B64.7-01	Vacuum Breakers, Laboratory Faucet Type (LFVP)	7.2.10.10.(1)
	CSA	CAN/CSA-B64.8-01	Backflow Preventers, Dual Check Valve Type with Intermediate Vent (DuCV)	7.2.10.10.(1)
	CSA	CAN/CSA-B64.9-01	"Backflow Preventers, Single Check Valve Type for Fire Systems (SCVAF)	7.6.2.4.(2) Table 7.6.2.4.
	CSA	CAN/CSA-B64.10-01	Manual for the Selection and Installation of Backflow Prevention Devices	7.2.10.10.(1)
m_6	CSA	CAN/CSA-B70-06	Cast Iron Soil Pipe, Fittings and Means of Joining	7.2.6.1.(1) 7.4.6.4.(2)
r_4	CSA	ASME A112.18.1-2005/ CAN/CSA-B125.1-05	Plumbing Supply Fittings	7.2.10.6.(1) 7.6.5.2.(1)
r_4	CSA	ASME A112.18.2-2005/ CAN/CSA-B125.2-05	Plumbing Waste Fittings	7.2.3.3.(1) 7.2.10.6.(2)
r_4	CSA	CAN/CSA-B125.3-05	Plumbing Fittings	7.2.10.6.(1) 7.2.10.10.(2) 7.6.5.2.(2)
	CSA	B127.1-99	Asbestos Cement Drain, Waste and Vent Pipe and Pipe Fittings	7.2.5.1.(1) 7.2.6.2.(1)
	CSA	B127.2-M1977	Components for Use in Asbestos Cement Building Sewer Systems	7.2.5.1.(2) 7.2.6.2.(1)
	Column 1	2	3	4

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

	Issuing Agency	Document Number	Title of Document	Code Reference
m_5 e_2	CSA	CAN/CSA-B137.1-05	Polyethylene (PE) Pipe, Tubing and Fittings for Cold Water Pressure Services	7.2.5.5.(1) Table 7.2.11.2.
m_5	CSA	CAN/CSA-B137.2-05	Polyvinylchloride (PVC) Injection-Moulded Gasketed Fittings for Pressure Applications	7.2.5.8.(1) 7.2.5.10.(1) Table 7.2.11.2.
m_5	CSA	CAN/CSA-B137.3-05	Rigid Polyvinylchloride (PVC) Pipe for Pressure Applications	7.2.5.8.(1; 7.2.5.10.(1) Table 7.2.11.2.
m_5	CSA	CAN/CSA-B137.5-05	Crosslinked Polyethylene (PEX) Tubing Systems for Pressure Applications	7.2.5.7.(1) Table 7.2.11.2.
m_5	CSA	CAN/CSA-B137.6-05	Chlorinated Polyvinylchloride (CPVC) Pipe, Tubing and Fittings for Hot and Cold Water Distribution Systems	7.2.5.9.(1; 7.2.5.9.(2) Table 7.2.11.2.
m_5	CSA	CAN/CSA-B137.9-05	Polyethylene/Aluminium/Polyethylene (PE-AL-PE) Composite Pressure-Pipe Systems	7.2.5.13.(1) Table 7.2.11.2.
m_5 r_4	CSA	CAN/CSA-B137.10-05	Crosslinked Polyethylene/Aluminum Crosslinked Polyethylene (PEX-AL-PEX) Composite Pressure-Pipe Systems	7.2.5.13.(4) 7.2.5.14.(1) Table 7.2.11.2.
m_5	CSA	CAN/CSA-B137.11-05	Polypropylene (PP-R) Pipe and Fittings for Pressure Applications	7.2.5.15.(1)
	CSA	B158.1-1976	Cast Brass Solder Joint Drainage, Waste and Vent Fittings	7.2.7.5.(1) 7.2.10.1.(1)
m_5	CSA	CAN/CSA-B181.1-06	Acrylonitrile-Butadiene-Styrene (ABS) Drain, Waste, and Vent Pipe and Pipe Fittings	7.2.5.10.(1) 7.2.5.11.(1) 7.2.5.12.(1) 7.2.5.12.(2) 7.2.10.1.(2) 7.4.6.4.(2)
m_5 e_2	CSA	CAN/CSA-B181.2-06	Polyvinylchloride (PVC) and Chlorinated Polyvinylchloride (CPVC) Drain, Waste, and Vent Pipe and Pipe Fittings	7.2.5.10.(1) 7.2.5.11.(1) 7.2.5.12.(1) 7.2.5.12.(2) 7.2.10.1.(3) 7.4.6.4.(2)
m_5	CSA	CAN/CSA-B181.3-06	Polyolefin and Polyvinylidene (PVDF) Laboratory Drainage Systems	7.2.8.1.(1)
m_5	CSA	CAN/CSA-B182.1-06	Plastic Drain and Sewer Pipe and Pipe Fittings	Table 5.10.1.1. 7.2.5.10.(1) 7.2.5.12.(2) 7.4.6.4.(2) 9.14.3.1.(1)
	Column 1	2	3	4

Table 1.3.1.2. (Cont'd)
Documents Referenced in the Building Code
Forming Part of Sentence 1.3.1.2.(1)

	Issuing Agency	Document Number	Title of Document	Code Reference
m_5	CSA	CAN/CSA-B182.2-06	PSM Type Polyvinylchloride (PVC) Sewer Pipe and Fittings	7.2.5.10.(1) 7.2.5.12.(2)
m_5	CSA	CAN/CSA-B182.4-06	Profile Polyvinylchloride (PVC) Sewer Pipe and Fittings	7.2.5.10.(1)
m_5	CSA	CAN/CSA-B182.6-06	Profile Polyethylene (PE) Sewer Pipe and Fittings for Leak-Proof Sewer Applications	7.2.5.10.(1)
m_5	CSA	CAN/CSA-B182.7-06	PSM Type Multilayer Polyvinylchloride (PVC) Sewer Pipe Having Reprocessed - Recycled Content	7.2.5.10.(1)
m_5	CSA	B242-05	Groove and Shoulder-Type Mechanical Pipe Couplings	7.2.10.4.(1)
	CSA	CAN/CSA-B272-93	Prefabricated Self-Sealing Vent Flashings	7.2.10.14.(2)
	CSA	CAN/CSA-B356-00	Water Pressure Reducing Valves for Domestic Water Supply Systems	7.2.10.12.(1)
m_5	CSA	CAN/CSA-B602-05	Mechanical Couplings for Drain, Waste, and Vent Pipe and Sewer Pipe	7.2.5.3.(2) 7.2.10.4.(2)
m_5 r_4	CSA	F379.1-09	Packaged Solar Domestic Hot Water Systems (Liquid-to-Liquid Heat Transfer) for All-Season Use	7.2.10.13.(1) 7.6.2.5.(3) 7.6.2.5.(4)
m_5	CSA	F383-08	Installation of Packaged Solar Domestic Hot Water Systems	7.6.1.13.(1)
	CSA	G401-01	Corrugated Steel Pipe Products	7.2.6.8.(1)
m_5	MAH	Supplementary Standard SA-1, January 1, 2010	Objectives and Functional Statements Attributed to the Acceptable Solutions	1.2.1.1.(1) of Division A 1.2.1.1.(2) of Division A
	MAH	Supplementary Standard SC-1, August 15, 2006	Code of Conduct for Registered Code Agencies	3.7.4.1.(2) of Division C
	MOE	Guidelines 1985, with Subsequent Revision	Guidelines for the Design of Sanitary Sewage Works, Storm Sewers, Water Storage Facilities, Water Distribution Systems, Servicing in areas subject to adverse conditions, Water Supply for small residential development and seasonally operated water supply	7.1.6.5.(1)
m_5	NFPA	24-2007	Installation of Fire Service Mains and Their Appurtenances	7.2.11.1.(1)
m_5	ULC	CAN/ULC-S114-05	Test for Determination of Non-Combustibility in Building Materials	1.4.1.2.(1) of Division A
	Column 1	2	3	4

1.3.2. Abbreviations

1.3.2.1. Abbreviations of Proper Names

(1) In this Code, an abbreviations of proper names listed in Column 1 of Table 1.3.2.1. shall have the meaning assigned opposite it in Column 2.

Table 1.3.2.1.
Abbreviations Of Proper Names
Forming Part of Sentence 1.3.2.1.(1)

Abbreviation	Meaning
ANSI	American National Standards Institute
APHA	American Public Health Association
ASME	The American Society of Mechanical Engineers
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
AWWA	American Water Works Association
CAN	National Standard of Canada designation The number or name following the CAN designation represents the agency under whose auspices the standard is issued. CAN1 designates CGA, CAN2 designates CGSB, CAN3 designates CSA, and CAN4 designates ULC.
CCBFC	Canadian Commission on Building and Fire Codes
CGSB	Canadian General Standards Board
CSA	Canadian Standards Association
MAH	Ontario Ministry of Municipal Affairs and Housing
MOE	Ontario Ministry of the Environment
NFPA	National Fire Protection Association
ULC	Underwriters' Laboratories of Canada
Column 1	2

Part 3
Fire Protection, Occupant Safety and Accessibility

Section 3.7. Health Requirements

3.7.4. Plumbing Facilities 3
3.7.6. Food Premises 16

Section 3.8. Barrier-Free Design

3.8.3. Design Standards 19

Part 3

Fire Protection, Occupant Safety and Accessibility

Section 3.7. Health Requirements

3.7.4. Plumbing Facilities

3.7.4.1. Plumbing and Drainage Systems

(1) Except as permitted in Sentence (3), each *building* situated on property that abuts on a *street* in which a public or municipal water main is located shall be provided with or have accessible to its occupants a *plumbing system* including a *potable* water supply, a *sanitary drainage system* and *plumbing fixtures*.

(2) When the installation of a *sanitary drainage system* is not possible because of the absence of a water supply, sanitary privies, chemical closets or other means for the disposal of human waste shall be provided.

(3) *Plumbing fixtures* need not be provided in a *building* that is not normally occupied by persons where such installations are impractical and other *fixtures* are available in nearby *buildings* when the subject *building* is in use.

3.7.4.2. Plumbing Fixtures, General

(1) For the purposes of this Subsection, the *occupant load* shall be determined in accordance with the provisions in Subsection 3.1.17. except that in a Group D *occupancy*, the area per person shall be 14 m^2.

(2) Except as provided in this Subsection, water closets shall be provided for each sex assuming that the *occupant load* is equally divided between males and females, unless the proportion of each sex expected in the *building* can be determined with reasonable accuracy.

(3) Except as provided in Sentence (4), urinals are permitted to be substituted for water closets required by this Subsection for males and may be counted as water closets provided the number of urinals is not more than,
(a) one fifth of the required number of water closets in hospitals and nursing homes, and
(b) two thirds of the required number of water closets in any other *occupancy*.

(4) If only 2 water closets are required for males, one urinal is permitted to be substituted for one of the water closets.

(5) Except as required in this Subsection, at least one lavatory shall be provided in a room containing one or 2 water closets or urinals, and at least one additional lavatory shall be provided for each additional 2 water closets or urinals.

(6) Wash fountains in circular or straight trough form are permitted to be provided in lieu of required lavatories provided each 500 mm of circumference or trough length is considered to be the equivalent of one lavatory.

r_1 **(7)** The water closet and lavatory provided in the universal toilet room described in Sentence 3.8.3.12.(1) may be counted as part of the *plumbing fixtures* required for males and females in this Subsection if,
(a) more than one water closet is required for males, and
(b) more than one water closet is required for females.

$r_{1.1}$ **(8)** Both sexes are permitted to be served by a single water closet if the *occupant load* is not more than 10 persons in an *assembly occupancy* referred to in Article 3.7.4.3. except for,
(a) elementary and secondary schools,
(b) child care facilities,
(c) places of worship,
(d) undertaking premises, and
(e) dining rooms, restaurants, cafeterias and alcoholic beverage establishments.

(9) Any shelf or projection above a lavatory shall be located so that it will not be a hazard.

(10) Except for *dwelling units*, lavatories required by Sentence (5) shall be equipped with faucets that,
(a) operate automatically, or
(b) have lever type handles that do not close under spring action.

3.7.4.3. Plumbing Fixtures for Assembly Occupancies

(1) Except as permitted by Sentences (2) to (16) and Sentence 3.7.4.2.(8), the number of water closets required for *assembly occupancies* shall conform to Table 3.7.4.3.A.

(2) Except for motion picture *theatres*, the number of water closets required for Group A, Division 1 *occupancies* shall conform to Table 3.7.4.3.B.

(3) The number of water closets required shall conform to Table 3.7.4.3.C. for,
(a) motion picture *theatres*,
(b) Group A, Division 3 *occupancies*,
(c) Group A, Division 4 *occupancies*, and
(d) *outdoor pools*.

Table 3.7.4.3.A.
Water Closets for Assembly Occupancies
Forming Part of Sentence 3.7.4.3.(1)

Number of Persons of Each Sex	Minimum Number of Water Closets for	
	Males	Females
1 - 25	1	1
26 - 50	1	2
51 - 75	2	3
76 - 100	2	4
101 - 125	3	5
126 - 150	3	6
151 - 175	4	7
176 - 200	4	8
201 - 250	5	9
251 - 300	5	10
301 - 350	6	11
351 - 400	6	12
Over 400	7 plus 1 for each additional increment of 200 males in excess of 400	13 plus 1 for each additional increment of 100 females in excess of 400
Column 1	2	3

Table 3.7.4.3.B.
Water Closets for Assembly Occupancies
Forming Part of Sentence 3.7.4.3.(2)

Number of Persons of Each Sex	Minimum Number of Water Closets for	
	Males	Females
1 to 50	1	2
51 to 75	2	3
76 to 100	2	4
101 to 125	3	5
126 to 150	3	6
151 to 175	4	7
176 to 200	4	8
201 to 250	5	9
251 to 300	5	10
301 to 350	6	11
351 to 400	6	12
over 400	7 plus 1 for each additional increment of 200 males in excess of 400	13 plus 1 for each additional increment of 100 females in excess of 400
Column 1	2	3

Table 3.7.4.3.C.
Water Closets for Assembly Occupancies
Forming Part of Sentence 3.7.4.3.(3)

Number of Persons of Each Sex	Minimum Number of Water Closets for Each Sex
1 to 50	1
51 to 150	2
151 to 250	3
251 to 375	4
376 to 500	5
over 500	6 plus 1 for each additional increment of 150 persons of each sex in excess of 500
Column 1	2

(4) Except as provided in Sentences (6) and (7), the number of water closets required for dining rooms, restaurants and cafeteria shall conform to Table 3.7.4.3.D.

(5) The number of water closets required for establishments used primarily for the consumption of alcoholic beverages that provide limited or no food service shall conform to Table 3.7.4.3.E.

Table 3.7.4.3.D.
Water Closets for Assembly Occupancies

Forming Part of Sentence 3.7.4.3.(4) and (7)

Number of Persons of Each Sex	Minimum Number of Water Closets for Each Sex
1 to 20	1
21 to 70	2
71 to 105	3
106 to 135	4
136 to 165	5
166 to 195	6
196 to 225	7
226 to 275	8
276 to 325	9
326 to 375	10
376 to 425	11
over 425	12 plus 1 for each additional increment of 50 persons of each sex in excess of 425
Column 1	2

Table 3.7.4.3.E.
Water Closets for Assembly Occupancies

Forming Part of Sentence 3.7.4.3.(5)

Number of Persons of Each Sex	Minimum Number of Water Closets for Each Sex
1 to 50	2
51 to 70	3
71 to 90	4
91 to 110	5
111 to 140	6
141 to 180	7
181 to 220	8
221 to 260	9
over 260	10 plus 1 for each additional increment of 40 persons of each sex in excess of 260
Column 1	2

(6) In every dining room, restaurant, cafeteria and alcoholic beverage establishment having more than 40 seats, separate sanitary facilities shall be provided for employees, in addition to facilities provided for patrons, and the number of water closets and lavatories required shall conform to Table 3.7.4.3.F.

Table 3.7.4.3.F.
Plumbing Fixtures for Assembly Occupancies
Forming Part of Sentence 3.7.4.3.(6) and (7)

Number of Employees of Each Sex	Minimum Number of Water Closets and Lavatories for	
	Males	Females
1 to 9	1	1
10 to 24	2	2
25 to 49	3	3
50 to 74	4	4
75 to 100	5	5
over 100	6 plus 1 for each additional increment of 30 male employees in excess of 100	6 plus 1 for each additional increment of 30 female employees in excess of 100
Column 1	2	3

(7) Except as provided in Sentence (8), in every dining room, restaurant, cafeteria and alcoholic beverage establishment having not more than 40 seats, patrons are permitted to share the sanitary facilities provided for employees, and the minimum number of water closets and lavatories shall conform to Table 3.7.4.3.D. based on,
(a) a male *occupant load* of 50% of the number of seats plus the number of male employees, and
(b) a female *occupant load* of 50% of the number of seats plus the number of female employees.

(8) Where a separate employee washroom is provided, the same room may be used by both female and male employees provided that,
(a) the total number of employees is not more than 5, and
(b) the door to the room can be locked from the inside.

(9) The number of employees in Sentences (6), to (8) shall be the maximum number of employees who are normally present on the premises at one time and shall include only those who are present for more than 25 per cent of the working day.

(10) For a parking lot that is part of a restaurant where patrons are intended to eat in vehicles parked on the lot, the number of water closets required shall conform to,
(a) Table 3.7.4.3.G. where food service by employees is not provided on the parking lot, or
(b) Table 3.7.4.3.H. where employees serve food on the parking lot.

(11) The number of water closets required for drive-in *theatres* shall conform to Table 3.7.4.3.H.

Table 3.7.4.3.G.
Water Closets for Assembly Occupancies
Forming part of Sentence 3.7.4.3.(10)

Number of Parking Spaces	Minimum Number of Water Closets for Each Sex
1 to 20	1
21 to 70	2
71 to 105	3
106 to 135	4
136 to 165	5
166 to 195	6
196 to 225	7
226 to 275	8
276 to 325	9
326 to 375	10
376 to 425	11
over 425	12 plus 1 for each additional increment of 50 parking spaces in excess of 425
Column 1	2

Table 3.7.4.3.H.
Water Closets for Assembly Occupancies
Forming part of Sentences 3.7.4.3.(10) and (11)

Number of Parking Spaces	Minimum Number of Water Closets for Each Sex
1 to 40	1
41 to 140	2
141 to 210	3
211 to 270	4
271 to 330	5
331 to 390	6
391 to 450	7
451 to 550	8
551 to 650	9
651 to 750	10
751 to 850	11
over 850	12 plus 1 for each additional increment of 100 parking spaces in excess of 850
Column 1	2

(12) The number of water closets required for dance halls and recreational establishments shall be not less than one fixture for each 100 males and one fixture for each 75 females.

(13) In a child care facility the maximum number of children per water closet and lavatory shall conform to Table 3.7.4.3.I.

Table 3.7.4.3.I.
Plumbing Fixtures for a Child Care Facility
Forming Part of Sentence 3.7.4.3.(13)

Age of Children	Maximum Number of Children per Water Closet and Lavatory
under 2	10 without regard to number of each sex
2 to 5	10 without regard to number of each sex
6 to 9	15 for males; 15 for females
over 9	30 for males; 26 for females
Column 1	2

(14) The number of water closets required for elementary and secondary schools shall be at least one fixture for each 30 males and one fixture for each 26 females.

(15) The number of water closets required for non-residential college *buildings* shall be at least one fixture for each 100 males and one fixture for each 75 females.

(16) The number of water closets required for places of worship and undertaking premises shall be at least one fixture for each 150 persons of each sex.

3.7.4.4. Plumbing Fixtures for Care or Detention Occupancies

(1) The number of water closets and lavatories required for Group B, Division 1 *occupancies* shall be determined on the basis of the special needs of these *occupancies*.

(2) In a Group B, Division 2 or 3 *occupancy*, washrooms shall be provided so that each washroom,
(a) serves not more than four patients or residents,
(b) is accessible from patients' or residents' sleeping rooms,
(c) contains one water closet, and
(d) contains one lavatory.

(3) The number of water closets required for employees in Group B, Division 2 or 3 *occupancies* shall conform to Table 3.7.4.4.

Table 3.7.4.4.
Water Closets in Group B, Division 2 or 3 Occupancies
Forming Part of Sentence 3.7.4.4.(3)

Number of Persons of Each Sex	Minimum Number of Water Closets for Each Sex
up to 9	1
10 to 24	2
25 to 49	3
50 to 74	4
75 to 100	5
over 100	6 plus 1 for each additional increment of 30 persons of each sex in excess of 100
Column 1	2

3.7.4.5. Plumbing Facilities for Dwelling Units

(1) A kitchen sink, lavatory, water closet and bathtub or shower stall shall be provided for every *dwelling unit* where a piped water supply is available.

3.7.4.6. Plumbing Fixtures for Other Residential Occupancies

(1) Except for *dwelling units* and as provided in Sentence (2), the number of water closets required for *residential occupancies* shall conform to Table 3.7.4.6.

Table 3.7.4.6.
Water Closets For Residential Occupancies
Forming Part of Sentence 3.7.4.6.(1)

Number of Persons of Each Sex	Minimum Number of Water Closets for Each Sex
up to 9	1
10 to 24	2
25 to 49	3
50 to 74	4
75 to 100	5
over 100	6 plus 1 for each additional increment of 30 persons of each sex in excess of 100
Column 1	2

(2) At least one water closet or privy shall be provided for every,
(a) 10 campers of each sex in a *recreational camp*, and
(b) 10 employees of each sex in a *camp for housing of workers*.

(3) In *recreational camps* and *camps for housing of workers*, no fewer than two lavatories or provision for a pail or other portable container of sound construction shall be provided for each of the water closets or privies required in Sentence (2).

(4) A *camp for housing of workers* shall include,
(a) at least one shower or other area of bathing, and
(b) provisions for at least one washing machine or laundry tub for every 15 beds.

3.7.4.7. Plumbing Fixtures for Business and Personal Services Occupancies

(1) Except as provided in Sentence (2), the number of water closets required for *business and personal services occupancies* shall conform to Table 3.7.4.7.

r_1 **(2)** Not more than one water closet to serve both sexes need be provided in a Group D *occupancy* having an *occupant load* of not more than 10 persons.

Table 3.7.4.7.
Water Closets for Business and Personal Services Occupancies
Forming Part of Sentence 3.7.4.7.(1)

Number of Persons of Each Sex	Minimum Number of Water Closets for Each Sex
up to 9	1
10 to 24	2
25 to 49	3
50 to 74	4
75 to 100	5
over 100	6 plus 1 for each additional increment of 30 persons of each sex in excess of 100
Column 1	2

3.7.4.8. Plumbing Fixtures for Mercantile Occupancies

(1) Except as provided in this Article, the number of water closets required for employees in *mercantile occupancies* shall conform to Table 3.7.4.8.

Table 3.7.4.8.
Water Closets for Mercantile Occupancies
Forming Part of Sentence 3.7.4.8.(1)

Number of Persons of Each Sex	Minimum Number of Water Closets for Each Sex
up to 9	1
10 to 24	2
25 to 49	3
50 to 74	4
75 to 100	5
over 100	6 plus 1 for each additional increment of 30 persons of each sex in excess of 100
Column 1	2

(2) Except as provided in Sentence (4), the number of water closets required for the public in *mercantile occupancies* shall be at least one fixture for each 300 males and one fixture for each 150 females, except that,

(a) water closets provided for employees are permitted to be counted as part of those required for the public when these water closets are made accessible to the public, and

(b) where the total area of the *mercantile occupancy*, excluding *basements*, is not more than 600 m^2, not more than one water closet for each sex need be provided.

(3) Not more than one water closet to serve both sexes need be provided in a Group E *occupancy* where,

(a) the *occupant load* is not more than 9 persons, or

(b) where the total area of the *occupancy*, excluding *basements*, is not more than 300 m^2.

(4) For a restaurant classified as *mercantile occupancy*, the number of water closets and lavatories required shall conform to Article 3.7.4.3.

3.7.4.9. Plumbing Fixtures for Industrial Occupancies

(1) Except as provided in Sentence (2), the number of water closets and lavatories required for *industrial occupancies* shall conform to Table 3.7.4.9.

Table 3.7.4.9.
Plumbing Fixtures for Industrial Occupancies
Forming Part of Sentence 3.7.4.9.(1)

Number of Persons of Each Sex	Minimum Number of Water Closets and Lavatories for Each Sex
up to 9	1
10 to 24	2
25 to 49	3
50 to 74	4
75 to 100	5
over 100	6 plus 1 for each additional increment of 30 persons of each sex in excess of 100
Column 1	2

(2) Not more than one water closet to serve both sexes need be provided in a Group F *occupancy* where,

r_1 (a) the *occupant load* is not more than 10 persons, or

(b) the total area of the *occupancy*, excluding *basements*, is not more than 300 m^2.

3.7.4.10. Plumbing Fixtures for Mobile Home Facilities

(1) If mobile homes do not have individual plumbing facilities connected to a central water supply and drainage system, a service *building* shall be provided for public use.

(2) The service *building* required by Sentence (1) shall contain,

(a) at least one water closet for each sex if the service *building* facilities serve not more than 10 mobile homes, and

(b) an additional water closet for each sex for each additional 10 mobile homes.

(3) If a service building is required by Sentence (1) it shall contain lavatories as required by Sentence 3.7.4.2.(5) and at least,

(a) one laundry tray or similar facility, and

(b) one bathtub or shower for each sex.

3.7.4.11. Safety Glass

(1) Glass, other than safety glass, shall not be used for a shower or bathtub enclosure.

3.7.4.12. Surface Protection

(1) Wall and floor surfaces below the uppermost surfaces of urinals shall be protected from deterioration by impervious and durable material for a distance from the urinal to a point not less than 900 mm from the projected outline of the urinal on to the wall or floor.

(2) Floor surfaces around a water closet shall be protected from deterioration by impervious and durable material for a distance not less than 900 mm from the projected outline of the water closet on to the floor.

3.7.4.13. Floor Drains

(1) A floor drain shall be installed in a washroom containing urinals equipped with automatic flushing devices.

3.7.4.14. Grab Bar Installation

(1) Grab bars that are installed shall resist a minimum load of 1.3 kN applied vertically or horizontally.

3.7.4.15. Privacy

(1) If a room contains not more than 1 water closet, the doorway to the room shall be provided with a full height door that is capable of being locked from the inside.

(2) If a room contains no fewer than 2 water closets or at least 1 water closet and 1 urinal, the room shall be designed so that water closets, urinals and lavatories are not visible from the entrance to the room.

3.7.4.16. Water Temperature Control

(1) A *water distribution system* supplying hot water to plumbing fixtures shall conform to the requirements in Subsection 7.6.5.

3.7.4.17. Drinking Water

(1) On every floor where work will be performed and within 100 m of any area where work will be performed, *potable* water shall be provided from,
(a) a fountain with an upward jet,
(b) a tap from a piped water supply, or
(c) a tap from a covered vessel.

3.7.4.18. Pharmacies

(1) Every *pharmacy* shall be provided with a sink with hot and cold *potable* water for washing utensils used in the preparation, service or storage of drugs.

3.7.6. Food Premises

3.7.6.1. Application

(1) The requirements of this Subsection apply to all *food premises*.

3.7.6.2. Room Finishes

(1) Except as provided in Sentence (2), floors and floor coverings shall be tight, smooth and non-absorbent in rooms where,
(a) food or drink for human consumption, or an ingredient of food or drink for human consumption, is manufactured, processed, prepared, stored, displayed, handled, served, distributed, sold or offered for sale,
(b) utensils are washed, or
(c) washing *fixtures* or toilet *fixtures* are located.

(2) Carpeting may be used in areas where food is served.

(3) Wall and ceiling finishes of rooms and passageways shall be easy to clean.

3.7.6.3. Location of Plumbing Fixtures

(1) A room containing a water closet shall be located where,
(a) it does not open directly into any room or area where food or drink for human consumption, or an ingredient of food or drink for human consumption, is intended to be stored, prepared, processed, distributed, served, sold or offered for sale, and
(b) it is not necessary for the public to go through the food preparation areas to gain access to the *plumbing fixtures*.

(2) Except as permitted in Sentence (3), a room containing *plumbing fixtures* for the public and employees in a restaurant shall be located in the restaurant.

(3) A room containing *plumbing fixtures* for the public in Sentence (2) need not be located in the restaurant if,
(a) the room is located in the *building* containing the restaurant, and
(b) the distance of travel between the restaurant and the room is not more than 45 m.

3.7.6.4. Lavatories, Appliances and Sinks

(1) A separate lavatory for the handwashing of employees shall be constructed in a location convenient for employees in each manufacturing, processing and preparation area.

(2) If equipment and facilities for the cleaning and sanitizing of utensils are provided, they shall consist of,
(a) mechanical equipment, or
(b) drainage racks of corrosion-resistant materials and,
  (i) a three-compartment sink or three sinks, or
  (ii) a two-compartment sink or two sinks, where the first compartment or sink can be used effectively for washing and rinsing and the second compartment or sink can be used effectively for sanitizing.

e_3 **(3)** A retail *food premises* is exempt from compliance with this Article if its eating and drinking area does not exceed 56 m^2 and any one or more of the following applies:
(a) it is designed to sell only cold drinks in or from the original container,
(b) it is designed to sell only frozen confections in the original package or wrapper,

(c) it is designed to prepare and sell only hot beverages,
(d) it is designed to prepare and sell only popped corn, roasted nuts or french-fried potatoes,
e_3 (e) it is designed to sell only food or drink for human consumption that,
  (i) is pre-packaged at a premise other than the *food premises* at which it is being offered for sale, and
  (ii) is not capable of supporting the growth of pathogenic organisms or the production of the toxins of such organisms.

3.7.6.5. Hot and Cold Water Supply

(1) A hot and cold water supply shall be provided to,
(a) every *plumbing appliance* and *fixture* required by Article 3.7.6.4.,
(b) every area where food or drink for human consumption, or an ingredient of food or drink for human consumption, is manufactured, processed or prepared, and
(c) every area where utensils are washed.

e_3 **(2)** This Article does not apply to a retail *food premises* described in Sentence 3.7.6.4.(3).

3.7.6.6. Employee Facilities

e_3 **(1)** In a *food premises*, where dressing rooms are provided for employees, there shall be separate dressing rooms for males and females that,
(a) are large enough for the employees to change and store their clothing, and
(b) are equipped with lockers or other facilities suitable for storing the clothing of the employees.

(2) Every room containing *sanitary units* for employees shall have a floor area not less than 2.3 m^2.

3.7.6.7. Sleeping Quarters

(1) A room or space intended to be used as sleeping quarters shall not open directly into any room where food or drink for human consumption, or an ingredient of food or drink for human consumption, is manufactured, processed, prepared, stored, displayed, handled, served, distributed, sold or offered for sale.

Section 3.8. Barrier-Free Design

3.8.3. Design Standards

3.8.3.8. Water Closet Stalls

(1) Where a washroom is required by Article 3.8.2.3. to be *barrier-free*, at least 1 water closet stall or enclosure shall,

(a) be at least 1 500 mm in width by 1 500 mm in depth,

(b) be equipped with a door that shall,

   (i) be capable of being latched from the inside with a mechanism that is operable by one hand,

   (ii) provide, when the door is in an open position, a clear opening of at least 810 mm,

   (iii) swing outward, unless 760 mm by 1 220 mm clear floor area is provided within the stall or enclosure to permit the door to be closed without interfering with the wheelchair,

   (iv) be provided with spring-type or gravity hinges so that the door closes automatically,

   (v) be provided with a door pull on the outside, near the latch side of the door, and

   (vi) be aligned with the clear manoeuvring space adjacent to the water closet,

(c) have a water closet located so that its centreline is not less than 460 mm and not more than 480 mm from an adjacent side wall on one side,

(d) be equipped with grab bars that shall,

   (i) be at least 760 mm in length and mounted at a 30° to 50° angle sloping upwards, away from the water closet with the lower end of the bar mounted 750 mm to 900 mm above the floor and 50 mm in front of the toilet bowl, or alternatively, be L-shaped with 760 mm long horizontal and vertical components mounted with the horizontal component 750 mm to 900 mm above the floor and the vertical component 150 mm in front of the toilet bowl,

   (ii) be at least 600 mm in length mounted horizontally on the wall behind the water closet from 840 mm to 920 mm above the floor and, where the water closet has a water tank, be mounted 150 mm above the tank,

   (iii) reserved,

   (iv) be installed to resist a load of at least 1.3 kN applied vertically or horizontally,

    - (v) be not less than 30 mm and not more than 40 mm in diameter,
    - (vi) have a clearance of 30 mm to 40 mm from the wall, and
    - (vii) have a slip resistant surface,
- (e) be equipped with a coat hook mounted not more than 1 200 mm above the floor on a side wall and projecting not more than 50 mm from the wall,
- (f) have a clearance of at least 1 700 mm between the outside of the stall face and the face of an in-swinging washroom door and 1 400 mm between the outside of the stall face and any wall-mounted fixture or other obstruction, and
- (g) when a toilet paper dispenser is provided, provide a dispenser that is,
    - (i) wall mounted,
    - (ii) located below the grab bar,
    - (iii) in line with or not more than 300 mm in front of the toilet seat, and
    - (iv) not less than 600 mm above the floor.

3.8.3.9. Water Closets

(1) Water closets for a person with physical disabilities shall,
- (a) be equipped with a seat located at not less than 400 mm and not more than 460 mm above the floor,
- (b) be equipped with hand-operated flushing controls that are easily accessible to a wheelchair user or be automatically operable,
- (c) be equipped with a back support where there is no seat lid or tank, and
- (d) not have a spring-activated seat.

3.8.3.10. Reserved

3.8.3.11. Lavatories

(1) A *barrier-free* washroom shall be provided with a lavatory that shall,
- (a) be located so that the distance between the centreline of the lavatory and the side wall is not less than 460 mm,
- (b) be mounted so that the top of the lavatory or, where the lavatory is in a vanity, the top of the vanity is not more than 840 mm above the finished floor,

(c) have a clearance beneath the lavatory not less than,
  (i) 760 mm wide,
  (ii) 735 mm high at the front edge,
  (iii) 685 mm high at a point 205 mm back from the front edge, and
  (iv) 230 mm high over the distance from a point 280 mm to a point 430 mm back from the front edge,

(d) have insulated pipes where they would otherwise present a burn hazard or have water supply temperature limited to a maximum of 43°C,

r_4 (e) be equipped with faucet handles of the lever type without spring loading or be automatically operable and are located so that the distance from the centreline of the faucet to the edge of the basin or, where the basin is mounted in a vanity, to the front edge of the vanity, is not more than 485 mm,

(f) have soap dispensers that are,
  (i) located to be accessible to persons in wheelchairs,
  (ii) located so that the dispensing height is not more than 1 200 mm above the floor, and
  r_4 (iii) operable with one hand, and

(g) have towel dispensers or other hand drying equipment that are,
  (i) located to be accessible to persons in wheelchairs,
  (ii) located so that the dispensing height is not more than 1 200 mm above the floor, and
  (iii) operable with one hand.

(2) If mirrors are provided in a *barrier-free* washroom, at least one mirror shall be,

(a) mounted with its bottom edge not more than 1 000 mm above the floor, or

(b) inclined to the vertical to be usable by a person in a wheelchair.

(3) If dispensing or hand-operated washroom accessories, except those located in toilet stalls or described in Clause (1)(f), are provided, they shall be mounted so that the dispensing height is between 900 mm and 1 200 mm above the floor.

3.8.3.12. Universal Toilet Rooms

(1) A universal toilet room shall,
(a) be served by a *barrier-free* path of travel,
(b) have a door capable of being locked from the inside and released from the outside in case of emergency and that has,
  (i) a graspable latch-operating mechanism located not less than 900 mm and not more than 1 000 mm above the floor,
  (ii) if it is an outward swinging door, a door pull not less than 140 mm long located on the inside so that its midpoint is not less than 200 mm and not more than 300 mm from the hinged side of the door and not less than 900 mm and not more than 1 000 mm above the floor, and
  (iii) if it is an outward swinging door, a door closer, spring hinges or gravity hinges, so that the door closes automatically,
(c) have one lavatory conforming to Article 3.8.3.11.,
(d) have one water closet conforming to the requirements of Article 3.8.3.9. and located,
  (i) so that its centreline is not less than 460 mm and not more than 480 mm from an adjacent side wall on one side, and
  (ii) not less than 1 020 mm to the wall on the other side,
(e) have grab bars conforming to Clause 3.8.3.8.(1)(d),
(f) have no internal dimension between walls that is less than 1 700 mm,
(g) have a coat hook conforming to Clause 3.8.3.8.(1)(e) and a shelf located not more than 1 200 mm above the floor,
(h) be designed to permit a wheelchair to back in alongside the water closet in the space referred to in Subclause (d)(ii),
(i) be designed to permit a wheelchair to turn in an open space not less than 1 500 mm in diameter, and
(j) be provided with a door equipped with a power door operator if the door is equipped with a self-closing device.

r_1 **(2)** Reserved.

3.8.3.13. Showers and Bathtubs

(1) Except within a *suite* of *residential occupancy*, if showers are provided in a *building*, at least one shower stall in each group of showers shall be *barrier-free* and shall,
(a) be not less than 1 500 mm wide and 900 mm deep,

(b) have a clear floor space at the entrance to the shower not less than 900 mm deep and the same width as the shower, except that fixtures are permitted to project into that space provided they do not restrict access to the shower,
(c) have a slip-resistant floor surface,
(d) have a bevelled threshold not more than 13 mm higher than the finished floor,
(e) have a hinged seat that is not spring-loaded or a fixed seat that shall be,
    (i) not less than 450 mm wide and 400 mm deep,
    (ii) mounted approximately 450 mm above the floor, and
    (iii) designed to carry a minimum load of 1.3 kN,
(f) have a horizontal grab bar conforming to Subclauses 3.8.3.8.(1)(d)(iv) to (vi) that is,
    (i) not less than 900 mm long,
    (ii) mounted approximately 850 mm above the floor, and
    (iii) located on the wall opposite the entrance to the shower so that not less than 300 mm of its length is at one side of the seat,
(g) have a pressure-equalizing or thermostatic mixing valve controlled by a lever or other device operable with a closed fist from the seated position,
(h) have a hand-held shower head with not less than 1 500 mm of flexible hose located so that it can be reached from the seated position and equipped with a support so that it can operate as a fixed shower head, and
(i) have fully recessed soap holders that can be reached from the seated position.

(2) Individual shower stalls that are provided for use by patients or residents in *buildings* of Group B, Division 2 or 3 *occupancy* shall conform to the requirements of Sentence (1).

(3) Individual bathtubs that are provided for the use of patients or residents in *buildings* of Group B, Division 2 or 3 *occupancy* shall have,
(a) faucet handles of the lever type that are not spring-loaded or be automatically operable,
(b) faucet handles that are located so as to be usable by a person seated in the bathtub, and

(c) unless the bathtub is free-standing, an "L"-shaped grab bar conforming to Subclauses 3.8.3.8.(1)(d)(iv) to (vi) mounted on the wall,
   (i) with each leg of the "L" being at least 900 mm long,
   (ii) with the legs of the "L" being separated by 90°,
   (iii) with the horizontal leg of the "L" being located between 150 mm and 200 mm above and parallel to the rim of the bathtub, and
   (iv) with the vertical leg of the "L" being located between 300 mm and 450 mm from the control end of the bathtub.

3.8.3.16. Drinking Fountains

(1) Where drinking fountains are provided, at least one shall be *barrier-free* and shall,

(a) have a spout located near the front of the unit not more than 915 mm above the floor, and

(b) be equipped with controls that are easily operated from a wheelchair using one hand with a force of not more than 22 N or be automatically operable.

Part 7
Plumbing

Section 7.1. General
7.1.1. Scope 3
7.1.2. Application 3
7.1.3. Definitions 3
7.1.4. Plumbing Facilities 3
7.1.5. Service Connections 4
7.1.6. Location of Fixtures 5

Section 7.2. Materials and Equipment
7.2.1. General 6
7.2.2. Fixtures 7
7.2.3. Traps and Interceptors 9
7.2.4. Pipe Fittings 10
7.2.5. Non-Metallic Pipe and Fittings 11
7.2.6. Ferrous Pipe and Fittings 17
7.2.7. Non-Ferrous Pipe and Fittings 20
7.2.8. Corrosion Resistant Materials 22
7.2.9. Jointing Materials 22
7.2.10. Miscellaneous Materials 23
7.2.11. Water Service Pipes and Fire Service Mains 27

Section 7.3. Piping
7.3.1. Application 30
7.3.2. Construction and Use of Joints 30
7.3.3. Joints and Connections 32
7.3.4. Support of Piping 34
7.3.5. Protection of Piping 38
7.3.6. Testing of Drainage and Venting Systems 40
7.3.7. Testing of Potable Water Systems 42

Section 7.4. Drainage Systems

7.4.1. Application 43
7.4.2. Connections to Drainage Systems 43
7.4.3. Location of Fixtures 45
7.4.4. Treatment of Sewage and Wastes 46
7.4.5. Traps 48
7.4.6. Arrangement of Drainage Piping 50
7.4.7. Cleanouts 52
7.4.8. Minimum Slope and Length of Drainage 55
7.4.9. Size of Drainage Pipes 56
7.4.10. Hydraulic Loads 59

Section 7.5. Venting Systems

7.5.1. Vent Pipes for Traps 67
7.5.2. Wet Venting 68
7.5.3. Circuit Venting 69
7.5.4. Vent Pipes for Soil or Waste Stacks 70
7.5.5. Miscellaneous Vent Pipes 72
7.5.6. Arrangement of Vent Pipes 74
7.5.7. Minimum Size of Vent Pipes 77
7.5.8. Sizing of Vent Pipes 79
7.5.9. Air Admittance Valves 84

Section 7.6. Potable Water Systems

7.6.1. Arrangement of Piping 85
7.6.2. Protection from Contamination 90
7.6.3. Size and Capacity of Pipes 95
7.6.4. Water Efficiency 98
7.6.5. Water Temperature Control 99

Section 7.7. Non-Potable Water Systems

7.7.1. Connection 100
7.7.2. Identification 101
7.7.3. Location 101

Part 7
Plumbing

Section 7.1. General

7.1.1. Scope

7.1.1.1. Scope

(1) The scope of this Part shall be as described in Subsection 1.1.2. of Division A.

7.1.2. Application

7.1.2.1. Application

(1) Except as provided in Sentence (2), this Part applies to the design and *construction* of *plumbing*.

(2) This Part does not apply to industrial process systems unless the industrial process system is interconnected with the *plumbing system*, in which case the interconnection shall be so designed and installed so that the *plumbing system* is protected against contamination or malfunction that may be caused by the industrial system.

7.1.3. Definitions

7.1.3.1. Definitions

(1) In this Part,

Storey means the interval between two successive floor levels including *mezzanine* floors that contain *plumbing* or between a floor level and roof.

7.1.4. Plumbing Facilities

7.1.4.1. Facilities Required

(1) *Plumbing* facilities shall be provided in accordance with Subsection 3.7.4. and Section 9.31.

7.1.4.2. Floor Drains

(1) Where gravity drainage to a *sanitary drainage system* is possible, a floor drain shall be installed in a basement forming part of a *dwelling unit*.

(2) Where gravity drainage to a *sanitary drainage system* is not possible, the floor drain required by Sentence (1) may be connected to a *storm drainage system*, dry well or drainage ditch provided it is located where it can receive only *clear water waste* or *storm sewage*.

(3) A floor drain shall be provided in a public laundry room, garbage room, incinerator room, *boiler* or heating room that is not located within a *dwelling unit*.

7.1.5. Service Connections

7.1.5.1. Sanitary Drainage Systems

(1) Every *sanitary drainage system* shall be connected to a public *sanitary sewer*, a public combined sewer or a *private sewage disposal system*.

(2) A combined *building drain* or a combined *building sewer* shall not be installed.

7.1.5.2. Storm Drainage Systems

(1) Every *storm drainage system* shall be connected to a public *storm sewage* works, a public combined *sewage* works or a designated storm water disposal location but shall not be connected to a *sanitary sewage* works.

7.1.5.3. Water Distribution Systems

(1) Except as provided in Sentence (2), every *water distribution system* shall be connected,
(a) to a watermain that is part of a *municipal drinking-water system*, or
(b) to a *drinking-water system*, if a watermain described in Clause (a) is not available.

(2) *Storm sewage* or *greywater* that is free of solids may be used for the flushing of water closets, urinals or the priming of *traps*.

(3) Piping conveying the non-*potable* water described in Sentence (2) shall be installed in conformance with Section 7.7.

r_4 7.1.5.4. Separate Services

(1) Except as provided in Sentences (2) and (3), piping in any *building* shall be connected to the public services separately from piping of any other *building*. (See Appendix A.)

(2) An ancillary *building* on the same property as the main *building* may be served by the same service.

(3) *Water service pipes* or *building sewers* serving *buildings* located on the same property may connect into a *private water supply* or a *private sewer* conforming to Article 7.1.5.5.

(4) No *plumbing* serving a *dwelling unit* shall be installed in or under another unit of the *building* unless the piping is located in a tunnel, pipe corridor, common *basement* or parking garage, so that the piping is *accessible* for servicing and maintenance throughout its length without encroachment on any private living space, but this Sentence does not prevent *plumbing* serving a unit located above another unit from being installed in or under the lower unit.

7.1.5.5. Private Sewers and Private Water Supply

(1) *Private sewers* and *private water supply* pipes shall be installed according to MOE, "Guidelines for the Design of Sanitary Sewage Systems, Guidelines for the Design of Storm Sewer Systems, Guidelines for the Design of Water Distribution Systems and Guidelines for Servicing in Areas Subject to Adverse Conditions".

7.1.6. Location of Fixtures

7.1.6.1. Lighting and Ventilation Requirements

(1) *Plumbing fixtures* shall not be installed in a room that is not lighted and ventilated in accordance with the appropriate requirements in Parts 3 and 9.

7.1.6.2. Accessibility

(1) Every *fixture*, *plumbing appliance*, *interceptor*, *cleanout*, valve, device or piece of equipment shall be so located that it is readily *accessible* for use, cleaning and maintenance.

Section 7.2. Materials and Equipment

7.2.1. General

7.2.1.1. Exposure of Materials

(1) Where unusual conditions exist such as excessively corrosive *soil* or water, only materials suited for use in such locations shall be used.

(2) Materials and equipment used in a *drainage system* where excessively corrosive wastes are present shall be suitable for the purpose.

7.2.1.2. Restrictions on Re-Use

(1) Used materials and equipment, including *fixtures*, shall not be reused unless they meet the requirements of this Part for new materials and equipment and are otherwise satisfactory for their intended use.

(2) Materials and equipment that have been used for a purpose other than the distribution of *potable* water shall not be subsequently used in a *potable water system*.

7.2.1.3. Identification and Certification

(1) Every length of pipe and every fitting shall have cast, stamped or indelibly marked on it the maker's name or mark and the weight or class or quality of the product, or it shall be marked in accordance with the relevant standard, and such markings shall be visible after installation.

(2) Where a component of a *plumbing system* is required by this Code to comply with a standard and the compliance is not certified by a testing agency accredited by the Standards Council of Canada for the testing of the component in question and, when an inspector requests proof of the compliance, proof of compliance shall be produced by the person proposing to install or have installed the component, and without such proof the component shall not be installed as a permanent part of any *plumbing system*.

(3) The lack of certification markings on a product or *plumbing* component shall be regarded as proof, in the absence of evidence to the contrary that no certification exists.

(4) If a component of a *plumbing system* is required to be certified to a standard, the certification shall be made by a testing agency accredited for that purpose by the Standards Council of Canada.

7.2.1.4. Pipe or Piping

(1) Where the term pipe or piping and fittings is used, it shall also apply to tube or tubing and fittings unless otherwise stated.

7.2.1.5. Withstanding Pressure

(1) Piping, fittings and joints used in pressure sewer, forcemain or sump pump discharge applications shall be capable of withstanding at least one and one-half times the maximum potential pressure.

7.2.2. Fixtures

7.2.2.1. Surface Requirements

(1) Except for the area designed to be slip proof in such *fixtures*, every exposed area of a *fixture* shall have a smooth, hard corrosion-resistant surface that is free from flaws and blemishes that may interfere with cleaning.

7.2.2.2. Conformance to Standards

(1) Every water closet and urinal shall conform to the requirements in Article 7.6.4.2.

(2) Every vitreous china fixture shall conform to CAN/CSA-B45.1, "Ceramic Plumbing Fixtures".

(3) Every enamelled cast iron fixture shall conform to CAN/CSA-B45.2, "Enamelled Cast Iron Plumbing Fixtures".

(4) Every porcelain enamelled steel fixture shall conform to CAN/CSA-B45.3, "Porcelain-Enamelled Steel Plumbing Fixtures".

(5) Every stainless steel fixture shall conform to CAN/CSA-B45.4, "Stainless Steel Plumbing Fixtures".

(6) Every plastic fixture shall conform to CAN/CSA-B45.5, "Plastic Plumbing Fixtures".

(7) Every hydromassage bathtub shall conform to CAN/CSA-B45.10, "Hydromassage Bathtubs".

(8) Every macerating toilet system for single bathrooms shall conform to CAN/CSA-B45.9, "Macerating Systems and Related Components".

7.2.2.3. Showers (See Appendix A.)

(1) Every shower receptor shall be constructed and arranged so that water cannot leak through the walls or floor.

(2) Not more than 6 shower heads shall be served by a single shower drain.

(3) Where two or more shower heads are served by a shower drain, the floor shall be sloped and the drain located so that water from one head cannot flow over the area that serves another head.

(4) Except for column showers, when a battery of shower heads is installed, the horizontal distance between two adjacent shower heads shall be at least 750 mm.

7.2.2.4. Concealed Overflows

(1) A dishwashing sink and a food preparation sink shall not have concealed overflows.

7.2.2.5. Water Closets in Public Washrooms

(1) Except for Eastern-Style toilets, where a water closet is installed in a washroom for *public use* it shall be of the elongated type and provided with a seat of the open front type. (See Appendix A.)

7.2.2.6. Lavatories

e_1 **(1)** A lavatory that does not have an overflow shall be equipped with a centre outlet waste fitting. (See Appendix A.)

7.2.2.7. Trough Urinals

(1) No trough urinal shall be used as part of a *plumbing system*.

7.2.3. Traps and Interceptors

7.2.3.1. Traps (See Appendix A.)

(1) Except as provided for in Sentence (2), every *trap* shall,
(a) have a *trap seal depth* of at least 38 mm,
(b) be so designed that failure of the seal walls will cause exterior leakage, and
(c) have a water seal that does not depend on the action of moving parts.

(2) The *trap seal depth* on *fixtures* draining to an acid waste system shall be a minimum of 50 mm.

(3) Every *trap* that serves a lavatory, a sink or a laundry tray shall
(a) be provided with a *cleanout* plug of a minimum ¾ in. *size* located at the lowest point of the *trap* and of the same material as the *trap*, except that a cast iron *trap* shall be provided with a brass *cleanout* plug, or
(b) be designed so that part of the *trap* can be removed for cleaning purposes.

(4) A bell *trap* or an S-*trap* shall not be installed in a *drainage system*.

(5) A *drum trap* shall not be installed in a *drainage system*.

(6) Except as permitted in Sentence (7), no *bottle trap* shall be used in a *plumbing system*.

(7) A *bottle trap* may be used on a laboratory sink or other *fixture* equipped with corrosion resistant fittings.

(8) No running *trap* shall be installed in a *plumbing system* unless an *accessible* handhole is provided for cleaning of the *trap*, and where the *trap* is too small to accommodate a handhole, a *cleanout* shall be provided.

7.2.3.2. Interceptors

(1) Every *interceptor* shall be designed so that it can be readily cleaned.

(2) Every grease *interceptor* shall be designed so that it does not become air bound.

7.2.3.3. Tubular Traps

r_4 **(1)** Tubular metal or plastic *traps* that conform to ASME A112.18.2 / CAN/CSA-B125.2, "Plumbing Waste Fittings" shall be used in *accessible* locations.

7.2.4. Pipe Fittings

7.2.4.1. T and Cross Fittings (See Appendix A.)

(1) A T fitting shall not be used in a *drainage system* except to connect a *vent pipe*.

(2) A cross fitting shall not be used in a *drainage system*.

7.2.4.2. Sanitary T Fittings

(1) A double sanitary T fitting shall not be used to connect the *fixture drains* of two urinals where no *cleanout* fitting is provided above the connection. (See Appendix A.)

(2) No pipe fitting, joint or connection that would tend to intercept solids or reduce the flow through a pipe by more than 10 percent shall be used in a *plumbing system*.

7.2.4.3. 90° Elbows

(1) Except as permitted in Sentences (2) and (3), 90° elbows of 4 in. *size* or less that have a centre-line radius that is less than the *size* of the pipe shall not be used to join two *soil* or *waste pipes*. (See Appendix A.)

(2) 90° elbows of 4 in. *size* or less in *sanitary drainage systems* may be used

(a) to change the direction of piping from horizontal to vertical, in the direction of flow,

(b) where a *trap arm* enters a wall, or
(c) to connect *trap arms* as permitted by Sentence 7.5.6.3.(2).

(3) A 90° elbow that is part of the pre-engineered wastewater heat recovery system is permitted to have a centre-line radius that is less than the *size* of the pipe.

7.2.4.4. Fittings Restricted in Use

(1) No double Y, double TY, double T or double waste fitting shall be installed in a *nominally horizontal soil* or *waste pipe*. (See Appendix A.)

7.2.4.5. Assembled Pipe or Tubing

(1) Pipe or tubing assembled to comprise a standard drain waste and venting system shall be connected with drain, waste and vent fittings in conformance with Table 7.2.4.5. (See Appendix A.)

7.2.5. Non-Metallic Pipe and Fittings

7.2.5.1. Asbestos-Cement Drainage Pipe and Fittings

(1) Except as provided in Sentence (2), asbestos-cement pipe and its fittings for use in a drain, waste or vent system shall conform to,
(a) CAN/CGSB-34.22, "Asbestos-Cement Drain Pipe", or
(b) CSA B127.1, "Asbestos Cement Drain, Waste and Vent Fittings".

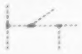
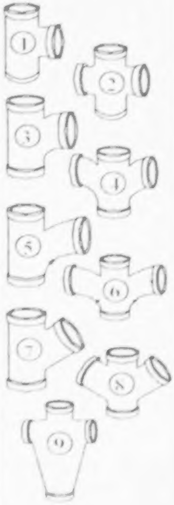
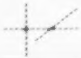
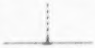
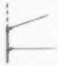
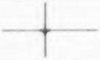
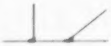
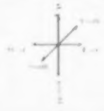
(2) Asbestos-cement pipe and fittings used underground either outside a *building* or under a *building* shall conform to Sentence (1) or to,
(a) CAN/CGSB-34.9, "Asbestos-Cement Sewer Pipe",
(b) CAN/CGSB-34.23, "Asbestos-Cement House Connection Sewer Pipe", or
(c) CSA B127.2, "Components for Use in Asbestos-Cement Building Sewer Systems".

7.2.5.2. Reserved

7.2.5.3. Concrete Pipe and Fittings

(1) Concrete pipe shall conform to CSA A257 Series,"Standards for Circular Concrete Pipe and Manholes".

Table 7.2.4.5.
Pipe Arrangement for DWV Fittings
Forming Part of Sentence 7.2.4.5.(1)

Pipe Arrangement	Fittings	
	Acceptable	Type
	①③⑤⑦	
	②④⑥⑧⑨	
	①③⑤⑦	
	③⑤⑦	
	④*⑥⑧⑨*	
	⑤⑦	
	LEGEND (DWV BRANCH FITTINGS) Vent pipe - - - - - - - - - - - - - - - Drainage pipe ———————— * Acceptable only if vertical run is of 3 inches size or larger and horizontal branches are of 1¼, 1½ or 2 inches size	

1. Straight T
2. Double T or Cross
3. Sanitary T or Short Turn TY
4. Double Sanitary T or Short Turn Double TY
5. Combination Y & ⅛ Bend or Long Turn TY
6. Double Combination Y & ⅛ Bend or Double Long Turn TY
7. Y
8. Double Y
9. Double Waste Fitting

(2) Joints with external elastomeric gaskets shall be made with corrosion resistant external band type flexible mechanical couplings that conform to CAN/CSA-B602, "Mechanical Couplings for Drain, Waste, and Vent Pipe and Sewer Pipe".

(3) Concrete fittings field fabricated from lengths of pipe shall not be used. (See Appendix A.)

(4) Concrete pipe shall not be used above ground inside a *building*.

(5) Precast reinforced circular concrete manhole sections, catch basins and fittings shall conform to CSA A257.4, "Precast Reinforced Circular Concrete Manhole Sections, Catch Basins, and Fittings".

7.2.5.4. Vitrified Clay Pipe and Fittings

(1) Vitrified clay pipe and fittings shall be certified to CSA A60.1-M, "Vitrified Clay Pipe".

(2) Couplings and joints for vitrified clay pipe shall be certified to CSA A60.3-M, "Vitrified Clay Pipe Joints".

(3) Vitrified clay pipe and fittings shall not be used except for an underground part of a *drainage system*.

7.2.5.5. Polyethylene Pipe and Fittings

m_5 **(1)** Polyethylene water pipe, tubing and fittings shall be certified to Series 160 of CAN/CSA-B137.1, "Polyethylene (PE) Pipe, Tubing and Fittings for Cold Water Pressure Services".

(2) Except as permitted in Sentence 7.2.5.7.(1), polyethylene water pipe shall not be used except for a *water service pipe*.

(3) Butt fusion fittings for polyethylene pipe shall conform to ASTM D3261, "Butt Heat Fusion Polyethylene (PE) Plastic Fittings for Polyethylene (PE) Plastic Pipe and Tubing".

7.2.5.6. Polyethylene Pipe Used Underground

(1) Polyethylene pipe used underground in a *drainage system* for rehabilitation of existing systems using trenchless technology shall conform to ASTM F714, "Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter" and shall be HDPE 3408, SDR 17 or heavier. (See Appendix A.)

7.2.5.7. Crosslinked Polyethylene Pipe and Fittings

m_5 **(1)** Crosslinked polyethylene pipe and its associated fittings used in hot and cold *potable water systems* shall be certified to CAN/CSA-B137.5, "Crosslinked Polyethylene (PEX) Tubing Systems for Pressure Applications". (See Appendix A.)

7.2.5.8. PVC Pipe and Fittings

m_5 **(1)** PVC water pipe, fittings and solvent cement shall be certified to CAN/CSA-B137.3, "Rigid Polyvinylchloride (PVC) Pipe for Pressure Applications" or CAN/CSA-B137.2, "Polyvinylchloride (PVC) Injection-Moulded Gasketed Fittings for Pressure Applications", and have a minimum pressure rating of 1 100 kPa.

(2) PVC water pipe and fittings in Sentence (1) shall not be used in a hot *water system*.

7.2.5.9. CPVC Pipe, Fittings and Solvent Cements

m_5 **(1)** CPVC hot and cold water pipe, fittings and solvent cements shall be certified to CAN/CSA-B137.6, "Chlorinated Polyvinylchloride (CPVC) Pipe, Tubing and Fittings for Hot and Cold Water Distribution Systems".

m_5 **(2)** The design temperature and design pressure of a CPVC piping system shall conform to CAN/CSA-B137.6, "Chlorinated Polyvinylchloride (CPVC) Pipe, Tubing and Fittings for Hot and Cold Water Distribution Systems".

7.2.5.10. Plastic Pipe, Fittings and Solvent Cement Used Underground (See Appendix A.)

(1) Plastic pipe, fittings and solvent cement used underground outside a *building* or under a *building* in a *drainage system* shall be certified to,
(a) ASTM F628, "Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste and Vent Pipe With a Cellular Core",
m_5 (b) CAN/CSA-B181.1, "Acrylonitrile-Butadiene-Styrene (ABS) Drain, Waste, and Vent Pipe and Pipe Fittings",
m_5 (c) CAN/CSA-B181.2, "Polyvinylchloride (PVC) and Chlorinated Polyvinylchloride (CPVC) Drain, Waste, and Vent Pipe and Pipe Fittings",
(d) CAN/CSA-B182.1, "Plastic Drain and Sewer Pipe and Pipe Fittings",

m_5 (e) CAN/CSA-B182.2, "PSM Type Polyvinylchloride (PVC) Sewer Pipe and Fittings",
m_5 (f) CAN/CSA-B182.4, "Profile Polyvinylchloride (PVC) Sewer Pipe and Fittings",
m_5 (g) CAN/CSA-B182.6, "Profile Polyethylene (PE) Sewer Pipe and Fittings for Leak-Proof Sewer Applications",
m_5 (h) CAN/CSA-B182.7, "PSM Type Multilayer Polyvinylchloride (PVC) Sewer Pipe Having Reprocessed-Recycled Content",
m_5 (i) CAN/CSA-B137.2, "Polyvinylchloride (PVC) Injection-Moulded Gasketed Fittings for Pressure Applications", or
m_5 (j) CAN/CSA-B137.3, "Rigid Polyvinylchloride (PVC) Pipe for Pressure Applications".

(2) Except as permitted in Clauses (i) and (j), plastic pipe used as described in Sentence (1) shall have a stiffness equal or greater than 320 kPa.

7.2.5.11. Transition Solvent Cement (See Appendix A.)

(1) Solvent cement for transition joints shall conform to,
m_5 (a) CAN/CSA-B181.1, "Acrylonitrile-Butadiene-Styrene (ABS) Drain, Waste, and Vent Pipe and Pipe Fittings", or
m_5 (b) CAN/CSA-B181.2, "Polyvinylchloride (PVC) and Chlorinated Polyvinylchloride (CPVC) Drain, Waste, and Vent Pipe and Pipe Fittings".

(2) Transition solvent cement shall only be used for joining an ABS *plumbing system* to a PVC *plumbing system*.

7.2.5.12. Plastic Pipe, Fittings and Solvent Cement Used in Buildings (See Appendix A.)

(1) Plastic pipe, fittings and solvent cement used inside or under a *building* in a *sanitary drainage system* or *venting system* shall be certified to,
(a) ASTM F628, "Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe With a Cellular Core",
m_5 (b) CAN/CSA-B181.1, "Acrylonitrile-Butadiene-Styrene (ABS) Drain, Waste, and Vent Pipe and Pipe Fittings", or
m_5 (c) CAN/CSA-B181.2, "Polyvinylchloride (PVC) and Chlorinated Polyvinylchloride (CPVC) Drain, Waste, and Vent Pipe and Pipe Fittings".

(2) Plastic pipe, fittings and solvent cement used inside a *building* in a *storm drainage system* shall be certified to,

(a) ASTM F628, "Acrylonitrile-Butadiene-Styrene (ABS) Schedule 40 Plastic Drain, Waste, and Vent Pipe With a Cellular Core",

m_5 (b) CAN/CSA-B181.1, "Acrylonitrile-Butadiene-Styrene (ABS) Drain, Waste, and Vent Pipe and Pipe Fittings",

m_5 (c) CAN/CSA-B181.2, "Polyvinylchloride (PVC) and Chlorinated Polyvinylchloride (CPVC) Drain, Waste, and Vent Pipe and Pipe Fittings",

(d) CAN/CSA-B182.1, "Plastic Drain and Sewer Pipe and Pipe Fittings", or

m_5 (e) CAN/CSA-B182.2, "PSM Type Polyvinylchloride (PVC) Sewer Pipe and Fittings".

(3) Plastic pipe used as described in Sentence (2) shall have a pipe stiffness equal or greater than 320 kPa.

(4) Requirements for *combustible* piping in relation to fire safety shall conform to Sentences 3.1.5.16.(1) and 9.10.9.6.(2) to (8) and Articles 3.1.9.4. and 9.10.9.7.

(5) Where *noncombustible* piping pierces a *fire separation* or a fire stop, the requirements for fire stopping of Subsection 3.1.9., Sentence 9.10.9.6.(1) and Article 9.10.16.4. shall apply.

7.2.5.13. Polyethylene/Aluminum/Polyethylene Composite Pipe and Fittings

m_5 **(1)** PE/AL/PE composite pipe and fittings used for *potable water systems* shall conform to CAN/CSA-B137.9, "Polyethylene/Aluminum/Polyethylene (PE-AL-PE) Composite Pressure-Pipe Systems". (See Appendix A.)

r_4 **(2)** Except as provided in Sentences (3) and (4), PE/AL/PE pipe and fittings shall not be used in a hot *water system*.

r_4 **(3)** PE/AL/PE pipe with a pressure rating of 690 kPa or greater at 82°C shall be permitted in a hot *water system*.

r_4 **(4)** PE/AL/PE pipe with a pressure rating of 690 kPa or greater at 82°C shall be used with fittings that conform to CAN/CSA-B137.10, "Crosslinked Polyethylene/Aluminum/ Crosslinked Polyethylene (PEX-AL-PEX) Composite Pressure-Pipe Systems", in a hot *water system*.

7.2.5.14. Crosslinked Polyethylene/ Aluminum/ Polyethylene Composite Pipe and Fittings

m_5 **(1)** PEX/AL/PEX composite pipe and fittings used for *potable water systems* shall conform to CAN/CSA-B137.10, "Crosslinked Polyethylene/Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Composite Pressure-Pipe Systems". (See Appendix A.)

7.2.5.15. Polypropylene Pipe and Fittings

(1) Polypropylene pipe and fittings used for hot and cold *potable water systems* shall conform to CAN/CSA-B137.11, "Polypropylene (PP-R) Pipe and Fittings for Pressure Applications". (See Appendix A.)

7.2.6. Ferrous Pipe and Fittings

7.2.6.1. Cast Iron Drainage and Vent Pipe and Fittings

(1) Drainage piping, vent piping and fittings made of cast iron shall be certified to CAN/CSA-B70, "Cast Iron Soil Pipe, Fittings and Means of Joining".

(2) Cast iron *soil pipe* and fittings shall not be used in a *water system*.

7.2.6.2. Cast Iron Fittings for Asbestos-Cement Drainage Pipe

(1) Cast iron fittings designed for use with asbestos- cement pipe for drainage purposes shall conform to the applicable requirements of,
(a) CSA B127.1, "Asbestos Cement Drain, Waste and Vent Fittings", or
(b) CSA B127.2-M, "Components for Use in Asbestos Cement Building Sewer Systems".

7.2.6.3. Threaded Cast Iron Drainage Fittings

(1) Threaded cast iron drainage fittings shall conform to ANSI/ASME B16.12, "Cast-Iron Threaded Drainage Fittings".

(2) Threaded cast iron drainage fittings shall not be used in a *water system*.

7.2.6.4. Cast Iron Water Pipe

(1) Cast iron water pipes shall conform to ANSI/AWWA C151/A21.51, "Ductile-Iron Pipe, Centrifugally Cast for Water".

(2) Cement mortar lining for cast iron water pipes shall conform to ANSI/AWWA C104/A21.4, "Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water".

r_4 **(3)** Cast iron fittings for cast iron or ductile-iron water pipes shall conform to ANSI/AWWA C110/A21.10, "Ductile-Iron and Gray-Iron Fittings for Water".

(4) Rubber gasket joints for cast iron and ductile-iron pressure pipe for water piping shall conform to ANSI/AWWA C111/A21.11, "Rubber-Gasket Joints for Ductile-Iron Pressure Pipe and Fittings".

7.2.6.5. Screwed Cast Iron Water Fittings

m_5 **(1)** Screwed cast iron water fittings shall conform to ANSI/ASME B16.4, "Gray Iron Threaded Fittings, Classes 125 and 250".

(2) Screwed cast iron water fittings used in a *water system* shall be cement-mortar lined or galvanized.

(3) Screwed cast iron water fittings shall not be used in a *drainage system*.

7.2.6.6. Screwed Malleable Iron Water Fittings

m_5 **(1)** Screwed malleable iron water fittings shall conform to ANSI/ASME B16.3, "Malleable Iron Threaded Fittings, Classes 150 and 300".

(2) Screwed malleable iron water fittings used in a *water system* shall be cement-mortar lined or galvanized.

(3) Screwed malleable iron water fittings shall not be used in a *drainage system*.

7.2.6.7. Steel Pipe

(1) Except as provided in Sentences (2) and (3), welded and seamless steel pipe shall not be used in a *plumbing system*.

(2) Galvanized steel pipe may be used in a *drainage system* or a *venting system* above ground inside a *building*.

(3) Galvanized steel pipe and fittings shall not be used in a *water distribution system* except,
(a) in *buildings* of *industrial occupancy*, or
(b) for the repair of existing galvanized steel piping systems.
(See Appendix A.)

(4) Galvanized steel pipe and fittings shall conform to ASTM A53/A53M, "Pipe, Steel, Black and Hot Dipped, Zinc-Coated Welded and Seamless".

(5) Where galvanized steel pipe is used in a *drainage system*, it shall be used with drainage fittings.

(6) All steel pipe of 4 in. *size* and smaller shall be schedule 40 or heavier and fittings of less than 2 in. *size* shall be galvanized screw fittings.

7.2.6.8. Corrugated Steel Pipe and Couplings

(1) Corrugated steel pipe and couplings shall be certified to CSA G401, "Corrugated Steel Pipe Products".

(2) Corrugated steel pipe shall only be used underground outside a *building* in a *storm drainage system*.

(3) Couplings for corrugated steel pipe shall be constructed so that when installed they shall,
(a) maintain the pipe alignment,
(b) resist the separation of adjoining lengths of pipe,
(c) prevent root penetration, and
(d) prevent the infiltration of surrounding material.

7.2.6.9. Sheet Metal Leaders

(1) A sheet metal *leader* shall not be used except above ground outside a *building*.

7.2.7. Non-Ferrous Pipe and Fittings

7.2.7.1. Copper and Brass Pipe

(1) Copper pipe shall conform to ASTM B42, "Seamless Copper Pipe, Standard Sizes".

(2) Brass pipe shall conform to ASTM B43, "Seamless Red Brass Pipe, Standard Sizes".

7.2.7.2. Brass or Bronze Pipe Flanges and Flanged Fittings

(1) Brass or bronze pipe flanges and flanged fittings shall conform to ANSI/ASME B16.24, "Cast Copper Alloy Pipe Flanges and Flanged Fittings".

7.2.7.3. Brass or Bronze Threaded Water Fittings

(1) Brass or bronze threaded water fittings shall conform to ANSI/ASME B16.15, "Cast Bronze Threaded Fittings, Classes 125 and 250".

(2) Brass or bronze threaded water fittings shall not be used in a *drainage system*.

7.2.7.4. Copper Tube

(1) Copper tube in a *plumbing system* shall,
(a) be certified to ASTM B88, "Seamless Copper Water Tube", or
(b) comply with ASTM B306, "Copper Drainage Tube (DWV)".

(2) The use of copper tube shall conform to Table 7.2.7.4.

(3) Copper tube used in a *plumbing appliance* shall conform to,
(a) ASTM B88 "Seamless Copper Water Tube", or
(b) ASTM B68 "Seamless Copper Tube".

Table 7.2.7.4.
Permitted Use of Copper Tube and Pipe
Forming Part of Sentence 7.2.7.4.(2)

r_4

Type of Copper Tube or Pipe	*Water Distribution System*		*Building Sewer*	*Drainage System*		*Venting System*	
	Under ground	Above ground		Under ground	Above ground	Under ground	Above ground
K & L hard	N	P	P	P	P	P	P
K & L soft	P	P	N	N	N	N	N
M hard	N	P	N	N	P	N	P
M soft	N	N	N	N	N	N	N
DWV	N	N	N	N	P	N	P
Column 1	2	3	4	5	6	7	8

Notes to Table 7.2.7.4.:
P - Permitted
N - Not Permitted

7.2.7.5. Solder-Joint Drainage Fittings

(1) Solder-joint fittings for *drainage systems* shall conform to,
(a) ASME B16.23, "Cast Copper Alloy Solder Joint Drainage Fittings: DWV", or
(b) ANSI/ASME B16.29, "Wrought Copper and Wrought Copper Alloy Solder Joint Drainage Fittings - DWV".

(2) Solder-joint fittings for *drainage systems* shall not be used in a *water system*.

7.2.7.6. Solder-Joint Water Fittings

(1) Except as provided in Sentence (2), solder-joint fittings for *water systems* shall conform to,
(a) ANSI B16.18, "Cast Copper Alloy Solder Joint Pressure Fittings", or
(b) ANSI/ASME B16.22, "Wrought Copper and Copper Alloy Solder Joint Pressure Fittings".

(2) Solder-joint fittings for *water systems* not made by casting or the wrought process shall conform to the applicable requirements of ANSI B16.18, "Cast Copper Alloy Solder Joint Pressure Fittings".

7.2.7.7. Flared-Joint Fittings for Copper Water Systems

(1) Flared-joint fittings for copper tube *water systems* shall conform to ANSI/ASME B16.26, "Cast Copper Alloy Fittings for Flared Copper Tubes".

(2) Flared-joint fittings for copper tube *water systems* not made by casting shall conform to the applicable requirements of ANSI/ASME B16.26, "Cast Copper Alloy Fittings for Flared Copper Tubes".

7.2.7.8. Lead Waste Pipe and Fittings

(1) Lead *waste pipe* and fittings shall not be used in a *water system* or for a *building sewer*.

(2) When there is a change in *size* of a lead closet bend, the change shall be in the vertical section of the bend or made in such a manner that there shall be no retention of liquid in the bend.

7.2.8. Corrosion Resistant Materials

7.2.8.1. Pipe and Fittings

(1) Pipes and fittings to be used for drainage and venting of acid and corrosive wastes shall conform to,
(a) ASTM A518/518M, "Corrosion-Resistant High-Silicon Iron Castings",
(b) ASTM C1053, "Boronsilicate Glass Pipe and Fittings for Drain, Waste, and Vent (DWV) Applications", or
m_5 (c) CAN/CSA-B181.3, "Polyolefin and Polyvinylidene (PVDF) Laboratory Drainage Systems".

7.2.9. Jointing Materials

7.2.9.1. Cement Mortar

(1) Cement mortar shall not be used for jointing.

7.2.9.2. Solder and Fluxes

(1) Solders for solder joint fittings shall conform to ASTM B32, "Solder Metal" in accordance with the recommended use.

(2) Solders and fluxes having a lead content in excess of 0.2 per cent shall not be used in a *potable water system*.

(3) Fluxes for soldered joints shall conform to ASTM B813, "Liquid and Paste Fluxes for Soldering Applications of Copper and Copper Alloy and Tube".

(4) Joints in all copper tube installed underground outside a *building* or underground inside the *building* shall be made with either flared or corporation fittings, or brazed using a brazing alloy from the American Welding Society AWS-BCuP range.

7.2.10. Miscellaneous Materials

r_4 7.2.10.1. Floor Flanges

(1) Brass floor flanges shall be certified to CSA B158.1, "Cast Brass Solder Joint Drainage, Waste and Vent Fittings".

m_5 **(2)** ABS floor flanges shall be certified to CAN/CSA-B181.1, "Acrylonitrile-Butadiene-Styrene (ABS) Drain, Waste, and Vent Pipe and Pipe Fittings".

m_5 **(3)** PVC floor flanges shall be certified to CAN/CSA-B181.2, "Polyvinylchloride (PVC) and Chlorinated Polyvinylchloride (CPVC) Drain, Waste, and Vent Pipe and Pipe Fittings".

(4) Cast iron, copper and aluminum floor flanges shall be suitable for the purpose.

7.2.10.2. Screws, Bolts, Nuts and Washers

(1) Every screw, bolt, nut and washer shall be of materials that are resistant to corrosion, when used,
(a) to connect a water closet to a water closet flange,
(b) to anchor the water closet flange to the floor,
(c) to anchor the water closet to the floor, or
(d) to hold *cleanout* covers or floor drain grates.

7.2.10.3. Cleanout Fittings

(1) Every plug, cap, nut or bolt that is intended to be removable from a ferrous fitting shall be of a non-ferrous material.

(2) A *cleanout* fitting that as a result of normal maintenance operations cannot withstand the physical stresses of removal and reinstallation or cannot ensure a gas-tight seal shall not be installed.

(3) A screw cap or test cap shall not be used as a *cleanout* plug or cover.

7.2.10.4. Mechanical Couplings

(1) Groove and shoulder type mechanical pipe couplings shall conform to CSA B242-M, "Groove and Shoulder Type Mechanical Pipe Couplings".

(2) Mechanical Couplings for DWV and Sewer Pipe shall be certified to CAN/CSA-B602, "Mechanical Couplings for Drain, Waste, and Vent Pipe and Sewer Pipe".

7.2.10.5. Saddle Hubs

(1) Except as provided in Sentence (2), a saddle hub or fitting shall not be installed in *drainage systems*, *venting systems* or *water systems*.

(2) A saddle hub or saddle clamp may be installed in a *building drain* or *building sewer* of nominal diameter not less than eight inches and that is in service provided that the connecting *branch* is at least two pipe *sizes* smaller than the run of the *building drain* or *building sewer* to which it is connected.

7.2.10.6. Supply and Waste Fittings

r_4 **(1)** Supply fittings shall conform to ASME A112.18.1 / CAN/CSA-B125.1, "Plumbing Supply Fittings" or CAN/CSA-B125.3, "Plumbing Fittings".

r_4 **(2)** Waste fittings shall conform to ASME A112.18.2 / CAN/CSA-B125.2, "Plumbing Waste Fittings".

7.2.10.7. Reserved

7.2.10.8. Direct Flush Valves

(1) Every direct flush valve shall,
(a) open fully and close positively under service pressure,
(b) complete its cycle of operation automatically,
(c) be provided with a means of regulating the volume of water that it discharges, and
(d) be provided with a *vacuum breaker* unless the *fixture* is designed so that *back-siphonage* cannot occur.

7.2.10.9. Drinking Fountain Bubblers

(1) The orifice of every drinking fountain bubbler shall,
(a) be of the shielded type, and
(b) direct the water upward to an angle of approximately 45°.

(2) Every drinking fountain bubbler shall include a means of regulating the flow to the orifice.

7.2.10.10. Back-Siphonage Preventers and Backflow Preventers

(1) Except as provided in Sentence (2) *back-siphonage preventers* and *backflow preventers* shall be certified to,
(a) CAN/CSA-B64.0, "Definitions, General Requirements and Test Methods for Vacuum Breakers and Backflow Preventers",
(b) CAN/CSA-B64.1.1, "Vacuum Breakers, Atmospheric Type (AVB)",
(c) CAN/CSA-B64.1.2, "Vacuum Breakers, Pressure Type (PVB)",
(d) CAN/CSA-B64.2, "Vacuum Breakers, Hose Connection Type (HCVB)",
(e) CAN/CSA-B64.2.1, "Vacuum Breakers, Hose Connection Type (HCVB) with Manual Draining Feature",
(f) CAN/CSA-B64.2.2, "Vacuum Breakers, Hose Connection type (HCVB) with Automatic Draining Feature",
(g) CAN/CSA-B64.3, "Backflow Preventers, Dual Check Valve with Atmospheric Port Type (DCAP)",
(h) CAN/CSA-B64.4, "Backflow Preventers, Reduced Pressure Principle Type (RP)",
(i) CAN/CSA-B64.5, "Backflow Preventers, Double Check Valve Type (DCVA)",

(j) CAN/CSA-B64.6, "Backflow Preventers, Dual Check Valve Type (DuC)",
(k) CAN/CSA-B64.7, "Vacuum Breakers, Laboratory Faucet Type (LFVP)",
(l) CAN/CSA-B64.8, "Backflow Preventers, Dual Check with Intermediate Vent Type (DuCV)", or
(m) CAN/CSA-B64.10, "Manual for the Selection and Installation of Backflow Prevention Devices".

r_4 **(2)** *Back-siphonage preventers* (anti-siphon fill valves) for tank type water closets shall be certified to CAN/CSA-B125.3, "Plumbing Fittings".

7.2.10.11. Relief Valves

(1) Temperature relief, pressure relief, combined temperature and pressure relief and vacuum relief valves shall conform to ANSI Z21.22 / CSA 4.4-M, "Relief Valves for Hot Water Supply Systems".

7.2.10.12. Reducing Valves

(1) Direct acting water pressure reducing valves for domestic water supply systems shall conform to CAN/CSA-B356, "Water Pressure Reducing Valves for Domestic Water Supply Systems".

7.2.10.13. Solar Domestic Hot Water

r_4 **(1)** Equipment forming part of a packaged system for solar heating of *potable* water, shall conform to CSA F379.1, "Packaged Solar Domestic Hot Water Systems (Liquid-to-Liquid Heat Transfer) for All-Season Use".

7.2.10.14. Vent Pipe Flashing

(1) Flashing fabricated on-site for *vent pipes* shall be fabricated from,
(a) copper sheet at least 0.33 mm thick,
(b) aluminum sheet at least 0.61 mm thick,
(c) alloyed zinc sheet at least 0.35 mm thick,
(d) lead sheet at least 2.16 mm thick,
(e) galvanized steel sheet at least 0.41 mm thick, or
(f) polychloroprene (neoprene) at least 2.89 mm thick.

(2) Prefabricated flashing for *vent pipes* shall be certified to CSA B272, "Prefabricated Self-Sealing Vent Flashings".

7.2.10.15. Water Hammer Arresters

(1) Factory built water hammer arresters shall conform to ASSE 1010, "Water Hammer Arresters".

7.2.10.16. Air Admittance Valves

(1) Air admittance valves shall conform to ASSE 1051, "Individual and Branch Type Air Admittance Valves for Sanitary Drainage Systems". (See Appendix A.)

7.2.11. Water Service Pipes and Fire Service Mains

7.2.11.1. Design, Construction, Installation and Testing

(1) Except as provided in Articles 7.2.11.2. to 7.2.11.4., and 7.3.7.2, the design, construction, installation and testing of *fire service mains* and *water service pipe* combined with *fire service mains* shall be in conformance with NFPA 24, "Installation of Private Fire Service Mains and Their Appurtenances".

7.2.11.2. Certification or Conformnce

(1) *Water service pipes* and *fire service mains* shall be certified or conform to the standards for the materials listed in Table 7.2.11.2.

r_1

Table 7.2.11.2.
Water Service Pipe and Fire Service Main Materials
Forming Part of Sentence 7.2.11.2.(1)

Material	Standard	Limitations
m_5 Polyethylene pipe and fittings	Certified to Series 160 of CAN/CSA-B137.1, "Polyethylene (PE) Pipe, Tubing and Fittings for Cold Water Pressure Services"	
m_5 Crosslinked polyethylene pressure pipe or tube and fittings	Certified to CAN/CSA-B137.5, "Crosslinked Polyethylene (PEX) Tubing Systems for Pressure Applications"	
m_5 e_3 PVC pipe and fittings	Certified to CAN/CSA-B137.3, "Rigid Polyvinylchloride (PVC) Pipe for Pressure Applications" or certified to CAN/CSA-B137.2, "Polyvinylchloride (PVC) Injection-Moulded Gasketed Fittings for Pressure Applications"	Pipe and fittings must have a rated working pressure of 1 100 kPa or more
m_5 CPVC pipe and fittings	Certified to CAN/CSA-B137.6, "Chlorinated Polyvinylchloride (CPVC) Pipe, Tubing and Fittings for Hot and Cold Water Distribution Systems"	The design temperature and pressure shall conform to the requirements of the CAN/CSA-B137.6, "Chlorinated Polyvinylchloride (CPVC) Pipe, Tubing and Fittings for Hot and Cold Water Distribution Systems"
Cast iron water pipe	Conform to ANSI/AWWA C151/A21.51, "Ductile-Iron Pipe, Centrifugally Cast, for Water"	Pipe shall have a cement mortar lining conforming to ANSI/AWWA C104/A21.4, "Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water"
m_5 Iron fittings for cast iron or ductile-iron water pipes	Conform to ANSI/AWWA C110/A21.10, "Ductile-Iron and Gray-Iron Fittings for Water"	Pipe shall have a cement mortar lining conforming to ANSI/AWWA C104/A21.4, "Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water"
Column 1	2	3

Table 7.2.11.2. (Cont'd)
Water Service Pipe and Fire Service Main Materials
Forming Part of Sentence 7.2.11.2.(1)

Material	Standard	Limitations
Rubber gasket joints for cast iron and ductile-iron water pipes	Conform to ANSI/AWWA C111/A21.11, "Rubber Gasket Joints for Ductile-Iron Pressure Pipe and Fittings"	
Screwed cast iron water fittings	Conform to ANSI/ASME B16.4, "Gray Iron Threaded Fittings, Classes 125 and 250"	Screwed cast iron water fittings shall be cement-mortar lined or galvanized
Type K soft copper tube	Certified to ASTM B88, "Seamless Copper Water Tube"	
Solder-joint fittings for copper water systems	Conform to ANSI B16.18, "Cast Copper Alloy Solder Joint Pressure Fittings", or conform to ANSI/ASME B16.22, "Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings"	Solder-joint fittings not made by casting or the wrought process shall conform to the applicable requirements of ANSI B16.18, "Cast Copper Alloy Solder-Joint Pressure Fittings"
Flared-joint fittings for copper water systems	Conform to ANSI/ASME B16.26, "Cast Copper Alloy Fittings for Flared Copper Tubes"	Flared-joint fittings not made by casting shall conform to ANSI/ASME B16.26, "Cast Copper Alloy Fittings for Flared Copper Tubes"
PE/AL/PE pipe and fittings	Certified to CAN/CSA-B137.9, "Polyethylene/ Aluminum/ Polyethylene (PE-AL-PE) Composite Pressure-Pipe Systems"	
PEX/AL/PEX pipe and fittings	Certified to CAN/CSA-B137.10, "Crosslinked Polyethylene/ Aluminum/ Crosslinked Polyethylene (PEX-AL-PEX) Composite Pressure-Pipe Systems"	
Column 1	2	3

7.2.11.3. Tracer Wire

(1) Except as provided in Sentence (2), a 14 gauge TW solid copper light coloured plastic coated tracer wire shall be attached to every non-metallic *water service pipe* or *fire service main*.

(2) Where a *water service pipe* or *fire service main* is detectable without the tracer wire referenced in Sentence (1), the tracer wire may be omitted.

7.2.11.4. Required Check Valve

(1) Where a *water service pipe* is supplied with water by more than one *drinking-water system*, a *check valve* shall be installed at each connection with a *drinking-water system*.

(2) Where a *fire service main* is supplied with water by more than one source, a *check valve* shall be installed at each connection with a source of water.

Section 7.3. Piping

7.3.1. Application

7.3.1.1. Application

(1) This Section applies to the *construction* and use of joints and connections, and the arrangement, protection, support and testing of piping.

7.3.2. Construction and Use of Joints

7.3.2.1. Caulked Lead Drainage Joints

(1) Every caulked lead drainage joint shall be firmly packed with oakum and tightly caulked with lead to a depth of at least 25 mm.

(2) No paint, varnish or other coating shall be applied on the lead until after the joint has been tested.

(3) Caulked lead drainage joints shall not be used except for cast iron pipe in a *drainage system* or *venting system*, or between such pipe and,
(a) other ferrous pipe,
(b) brass and copper pipe,
(c) a caulking ferrule, or
(d) a *trap standard*.

(4) A length of hub and spigot pipe and pipe fittings in a *drainage system* shall be installed with the hub at the upstream end.

7.3.2.2. Wiped Joints

(1) Wiped joints shall not be used except for sheet lead or lead pipe, or between such pipe and copper pipe or a ferrule.

(2) Every wiped joint in straight pipe shall,
(a) be made of solder,
(b) have an exposed surface on each side of the joint at least 19 mm wide, and
(c) be at least 10 mm thick at the thickest part.

(3) Every wiped flanged joint shall be reinforced with a lead flange that is at least 19 mm wide.

7.3.2.3. Screwed Joints

(1) In making a screwed joint the ends of the pipe shall be reamed or filed out to the *size* of the bore and all chips and cuttings shall be removed.

(2) No pipe-joint cement or paint shall be applied to the internal threads.

7.3.2.4. Solder Joints

(1) Soldered joints shall be made in accordance with ASTM B828, "Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings".

7.3.2.5. Flared Joints

(1) In making a flared joint the pipe shall be expanded with a proper flaring tool.

(2) Flared joints shall not be used for hard (drawn) copper tube.

7.3.2.6. Mechanical Joints

(1) Mechanical joints shall be made with compounded elastomeric couplings or rings held by stainless steel or cast iron clamps or contained within a compression connection or groove and shoulder type mechanical coupling. (See Appendix A.)

7.3.2.7. Cold-Caulked Joints

(1) Cold-caulked joints shall not be used except for bell and spigot pipe in a *water system*, a *drainage system* or a *venting system*.

(2) The caulking compound used in cold-caulked joints shall be applied according to the manufacturer's directions.

(3) Every cold-caulked joint in a *drainage system* shall be firmly packed with oakum and tightly caulked with cold caulking compound to a depth of at least 25 mm.

7.3.3. Joints and Connections

7.3.3.1. Drilled and Tapped Joints

(1) Except as provided in Sentences (2) to (4), no water *distributing pipe*, drainage pipe or fittings shall be drilled, tapped or swaged.

(2) A water *distributing pipe* may be drilled or tapped to provide for a mechanically extracted T in copper tubing of Type L or K provided that all branch connections shall be notched and dimpled to limit depth of insertion and conform to the inner contour of the main.

(3) A copper water *distributing pipe* of 1 in. *size* or larger may be mechanically swaged to permit the joining of other copper pipe of equal *size*.

(4) A drainage pipe or fitting may be drilled or tapped,
(a) to provide for the connection of a *trap* seal primer line,
(b) to connect a device designed to dispense germicidal or odour control chemicals or *trap* seal water to a floor drain downstream of a *vacuum breaker* or flush valve in a flush tube connected to a *sanitary unit*,
(c) to provide a hole for a *branch* connection to a drainage pipe, where the *branch* connection is made with a saddle hub as permitted by Article 7.2.10.5. and where the hole is drilled to provide a smooth clean hole of the required *size* and orientation, or
(d) to provide for the connection of pipe or fittings to metal or rigid plastic pipe and fittings where the pipe or fittings are thick enough to be threaded or are bossed for tapping.

(5) No pipe adaption shall be made by the use of a bushing that leaves a square edge or shoulder on the inside of the pipe or fitting.

7.3.3.2. Reserved

7.3.3.3. Prohibition of Welding of Pipes and Fittings

(1) Cast iron *soil pipe* and fittings shall not be welded.

(2) Galvanized steel pipe and fittings shall not be welded.

7.3.3.4. Unions and Slip Joints

(1) Running thread and packing nut connections and unions with a gasket seal shall not be used downstream of a *trap weir* in a *drainage system* or in a *venting system*.

(2) A slip joint shall not be used,
(a) in a *venting system*, or
(b) in a *drainage system*, except to connect a *fixture trap* to a *fixture drain* in an *accessible* location.

7.3.3.5. Increaser or Reducer

(1) Every connection between two pipes of different *size* shall be made with an increaser or a reducer fitting installed so that it will permit the system to be completely drained.

7.3.3.6. Connection of Dissimilar Materials

(1) Adapters, connectors or mechanical joints used to join dissimilar materials shall be designed to accommodate the required transition.

7.3.3.7. Connection of Roof Drain to Leader

(1) Every *roof drain* shall be securely connected to a *leader* and provision shall be made for expansion.

7.3.3.8. Connection of Floor Outlet Fixtures

(1) Every pedestal urinal, floor-mounted water closet or S-*trap standard* shall be connected to a *fixture drain* by a floor flange, except that a cast iron *trap standard* may be caulked to a cast iron pipe.

(2) Except as provided in Sentence (3), every floor flange shall be of brass.

(3) Where cast iron or plastic pipe is used, a floor flange of the same material may be used.

(4) Every floor flange shall be securely set on a firm base and bolted to the *trap* flange of the *fixture*, and every joint shall be sealed with a natural rubber, synthetic rubber gasket, or with a closet setting compound.

(5) Where a lead water closet stub is used, the length of the stub below the floor flange shall be at least 75 mm.

7.3.3.9. Expansion and Contraction

(1) The design and installation of every piping system shall, where necessary, include means to accommodate expansion and contraction of the piping system caused by temperature change or *building* shrinkage. (See Appendix A.)

7.3.3.10. Copper Tube

(1) Types M and DWV copper tube shall not be bent.

(2) Bends in copper tubing of soft or bending temper shall be made with tools manufactured and sized for the purpose.

7.3.3.11. Indirect Connections (See Appendix A.)

(1) Where a *fixture* or device is *indirectly connected*, the connections shall be made by terminating the *fixture drain* above the *flood level rim* of a *directly connected fixture* to form an *air break*.

(2) The size of the *air break* shall be at least 25 mm.

7.3.4. Support of Piping

7.3.4.1. Capability of Support

(1) Piping shall be provided with support that is capable of keeping the pipe in alignment and bearing the weight of the pipe and its contents.

(2) Every floor or wall mounted water closet bowl shall be securely attached to the floor or wall by means of a flange and shall be stable.

(3) Every wall mounted *fixture* shall be supported so that no strain is transmitted to the piping.

7.3.4.2. Independence of Support

(1) Piping, *fixtures*, tanks or devices shall be supported independently of each other.

7.3.4.3. Insulation of Support

(1) Where a hanger or support for copper tube or brass or copper pipe is of a material other than brass or copper, it shall be suitably separated and electrically insulated from the pipe to prevent galvanic action.

7.3.4.4. Support for Vertical Piping

(1) Except as provided in Sentence (2), vertical piping shall be supported at its base and at the floor level of alternate *storeys* by rests, each of which can bear the weight of pipe that is between it and the rest above it.

(2) The maximum spacing of supports shall be 7.5 m.

7.3.4.5. Support for Horizontal Piping

(1) *Nominally horizontal* piping that is inside a *building* shall be braced to prevent swaying and buckling and to control the effects of thrust.

(2) *Nominally horizontal* piping shall be supported so that,
(a) galvanized iron or steel pipe is supported at intervals not exceeding,
    (i) 3.75 m if the pipe *size* is 6 in. or more, and
    (ii) 2 500 mm if the pipe *size* is less than 6 in.,
(b) lead pipe is supported throughout its length,
(c) cast iron pipe is supported,
    (i) at or adjacent to each hub or joint,
    (ii) at intervals not exceeding 3 m, and
    (iii) at intervals not exceeding 1 000 mm if the pipe has mechanical joints and the length of pipe between adjacent fittings is 300 mm or less,
(d) asbestos-cement pipe is supported,
    (i) at intervals not exceeding 2 000 mm or have two supports for every 4 m length of pipe, and
    (ii) at intervals not exceeding 1 000 mm where the length of pipe between adjacent fittings is 300 mm or less,

(e) ABS or PVC plastic DWV pipe is supported,
  (i) at intervals not exceeding 1 200 mm,
  (ii) at the ends of *branches*,
  (iii) at changes of direction or elevation, and
  (iv) if the pipe is a *fixture drain* that is more than 1 000 mm in length, as close as possible to the *trap*,
(f) plastic water pipe is supported at intervals not exceeding 1 000 mm,
(g) copper tube and copper and brass pipe is supported at intervals not exceeding,
  (i) 3 m if the tube or pipe is hard temper and larger than 1 in. in *size*,
  (ii) 2 500 mm if the tube or pipe is hard temper and 1 in. in *size* or less, and
  (iii) 2 500 mm if the tube is soft temper,
(h) aluminum DWV pipe is supported,
  (i) at intervals not greater than 3 m,
  (ii) at both sides of all joints,
  (iii) at all *branch* ends,
  (iv) at all points where there is a change in direction, and
  (v) as close to all *traps* as possible,
(i) supports and hangers for aluminum DWV pipe shall have a broad support base and shall be free of burrs and rough edges to prevent abrasion of the pipe,
(j) where joints in the piping are less rigid than the pipe, the support points shall be selected so as to minimize the shear and bending forces imposed on the joints,
(k) PE/AL/PE or PEX/AL/PEX composite pipe is supported at intervals not exceeding 1 000 mm, and
(l) PP-R plastic pipe is supported,
  (i) at intervals not exceeding 1 000 mm,
  (ii) at the end of *branches*, and
  (iii) at changes of direction and elevation.

(3) Where plastic pipe or a composite pipe incorporating a plastic component is installed,
(a) the pipe shall be aligned without added strain on the piping,
(b) the pipe shall not be bent or pulled into position after being welded or joined, and
(c) hangers shall not compress, cut or abrade the pipe.

(4) Reserved.

(5) Where hangers are used to support *nominally horizontal* piping they shall be,

(a) hangers with metal rods of not less than,
  (i) 6 mm diam for supporting pipe 2 in. or less in size,
  (ii) 8 mm diam for supporting pipe 4 in. or less in size, and
  (iii) 13 mm diam for supporting pipe over 4 in. in size, or
(b) solid or perforated metal straps not less than,
  (i) 0.6 mm nominal thickness, 12 mm wide for pipe 2 in. or less in size, and
  (ii) 0.8 mm nominal thickness, 18 mm wide for pipe 4 in. or less in size.

(6) Where a hanger is attached to concrete or masonry, it shall be fastened by metal or expansion-type plugs that are inserted or built into the concrete or masonry.

7.3.4.6. Support for Underground Horizontal Piping

(1) Except as provided in Sentence (2), *nominally horizontal* piping that is underground shall be supported on a base that is firm and continuous under the whole of the pipe. (See Appendix A.)

(2) *Nominally horizontal* piping installed underground that is not supported as described in Sentence (1) may be installed using hangers fixed to a foundation or structural slab provided that the hangers are capable of,

(a) keeping the pipe in alignment, and
(b) supporting the weight,
  (i) of the pipe,
  (ii) its contents, and
  (iii) the fill over the pipe.

7.3.4.7. Support for Vent Pipe Above a Roof

(1) Where a *vent pipe* terminates above the surface of a roof it shall be supported or braced to prevent misalignment.

7.3.4.8. Compression Fittings

(1) No compression fitting connecting to plain end pipe or tube shall be used in a *plumbing system* unless the pipe or tube and fittings are sufficiently stayed, clamped, anchored or buttressed so as to prevent separation during normal service of the system allowing for surge pressures.

7.3.4.9. Thrust Restraint of Water Service Pipes
(See Appendix A.)

(1) Pipe clamps and tie-rods, thrust blocks, locked mechanical or push-on joints, mechanical joints utilizing set screw retainer glands, or other suitable means of thrust restraint shall be provided at each change of direction of a *water service pipe* 4 in. or more in *size* and at all tees, plugs, caps and bends.

(2) Backing for underground *water service pipes* shall be placed,
(a) between undisturbed earth and the fitting to be restrained and shall be of sufficient bearing area to provide adequate resistance to the thrust to be encountered, and
(b) so that the joints will be *accessible* for inspection and repair.

(3) Concrete thrust blocks shall have a minimum compressive strength of not less than 10 MPa after 28 days.

(4) Thrust blocks shall not be used to restrain vertical pipe.

7.3.5. Protection of Piping

7.3.5.1. Backfill of Pipe Trench

(1) Where piping is installed underground, the backfill shall be carefully placed and tamped to a height of 300 mm over the top of the pipe and shall be free of stones, boulders, cinders and frozen earth. (See Appendix A.)

7.3.5.2. Protection of Non-Metallic Pipe

(1) Where asbestos-cement drainage pipe or vitrified clay is located less than 600 mm below a basement floor and the floor is constructed of other than 75 mm or more of concrete, the pipe shall be protected by a 75 mm layer of concrete installed above the pipe. (See Appendix A.)

7.3.5.3. Isolation from Loads

(1) Where piping passes through or under a wall it shall be installed so that the wall does not bear on the pipe.

7.3.5.4. Protection from Frost

(1) Where piping may be exposed to freezing conditions it shall be protected from the effects of freezing. (See Appendix A.)

7.3.5.5. Protection from Mechanical Damage

(1) *Plumbing*, piping and equipment exposed to mechanical damage shall be protected.

7.3.5.6. Protection from Condensation

(1) Piping used for internal *leaders*, which may be subject to condensation, shall be installed in a manner that limits the risk of damage to the *building* due to condensation.

7.3.5.7. Spatial Separation (See Appendix A.)

r₄ **(1)** Except as permitted in Sentences (2) and (3), a buried *water service pipe* shall be separated from the *building drain*, *building sewer* and a *private sewage disposal system*, by not less than 2 440 mm measured horizontally, of undisturbed or compacted earth.

(2) The *water service pipe* may be closer than 2 440 mm or be placed in the same trench with the *building drain* or *building sewer* if,

- (a) the following conditions are met:
  - (i) the bottom of the *water service pipe* at all points is at least 500 mm above the top of the *building drain* or *building sewer*, and
  - (ii) when in a common trench with the *building drain* or *building sewer*, the *water service pipe* is placed on a shelf at one side of the common trench,
- (b) the *water service pipe* is constructed of a single run of pipe with no joints or fittings between the street line or source of supply on the property and the inside face of the *building*, or
- (c) the *building drain* or *building sewer* is constructed of piping which is pressure tested in accordance with Subsection 7.3.7. at 345 kPa.

r₄ **(3)** A buried *water service pipe* may pass under a *building drain* or *building sewer* if,

- (a) a vertical separation of not less than 500 mm is provided between the invert of the *building drain* or *building sewer* and the crown of the *water service pipe*,

(b) adequate structural support is provided for the *building drain* or *building sewer* to prevent excessive deflection of joints and settling, and

(c) the length of the *water service pipe* is located so that there are no joints within 2 440 mm measured horizontally from the intersection with the *building drain* or *building sewer*.

r_4 **(4)** A buried *water service pipe* shall be constructed of a single run of pipe with no joints or fittings between the street line or source of supply on the property and the inside face of the *building* if the *water service pipe* is less than 15 m from,

(a) a *private sewage disposal system*, or

(b) a source of pollution other than a *private sewage disposal system*.

7.3.6. Testing of Drainage and Venting Systems

7.3.6.1. Tests and Inspection of Drainage or Venting Systems

(1) Except in the case of an external *leader*, after a section of *drainage system* or a *venting system* has been roughed in, and before any *fixture* is installed or piping is covered, a water or an air test shall be conducted.

(2) Where a *chief building official* requires a final test, it shall be carried out after every *fixture* is installed and before any part of the *drainage system* or *venting system* is placed in operation.

(3) Where a prefabricated system is assembled off the *building* site in such a manner that it cannot be inspected and tested on site, off-site inspections and tests shall be conducted.

(4) Where a prefabricated system is installed as part of a *drainage system* and *venting system*, all other *plumbing* work shall be tested and inspected and a final test shall be carried out on the complete system.

(5) A ball test shall be carried out on a *sanitary building drain*, *sanitary building sewer*, *storm building drain* and a *storm building sewer* buried underground.

7.3.6.2. Tests of Pipes in Drainage Systems

(1) Every pipe in a *drainage system*, except an external *leader* or *fixture outlet pipe*, shall be capable of withstanding without leakage a water test, air test and final test.

7.3.6.3. Tests of Venting Systems

(1) Every *venting system* shall be capable of withstanding without leakage a water test, air test and final test.

7.3.6.4. Water Tests in Drain, Waste and Vent Systems

(1) Where a water test is made, all joints shall be tested with a water column of not less than 3 m.

(2) In making a water test,
(a) every opening except the highest shall be tightly closed with a testing plug or a test cap, and
(b) the system or the section shall be kept filled with water for 15 min.

7.3.6.5. Air Tests

(1) Where an air test is made, it shall be conducted in accordance with the manufacturer's instructions for the piping materials, and,
(a) air shall be forced into the system until a gauge pressure of 35 kPa is created, and
(b) this pressure shall be maintained for at least 15 min without a drop in pressure.

7.3.6.6. Final Tests

(1) Where a final test is made,
(a) every *trap* shall be filled with water,
(b) the bottom of the system being tested shall terminate at the *building trap*, test plug or cap,
(c) except as provided in Sentence (2), smoke from smoke-generating machines shall be forced into the system,
(d) when the smoke appears from all roof terminals they shall be closed, and
(e) a pressure equivalent to a 25 mm water column shall be maintained for 15 min without the addition of more smoke.

(2) The smoke referred to in Clauses (1)(c) and (d) may be omitted provided the roof terminals are closed and the system is subjected to an air pressure equivalent to a 25 mm water column maintained for 15 min without the addition of more air.

7.3.6.7. Ball Tests

(1) Where a ball test is made, a hard ball dense enough not to float shall be rolled through the pipe.

(2) The diameter of the ball shall be not less than 50 mm where the *size* of the pipe is 4 in. or more.

7.3.7. Testing of Potable Water Systems

7.3.7.1. Application of Tests

(1) After a section of a *potable water system* has been completed, and before it is placed in operation, a water test or an air test shall be conducted.

(2) A test may be applied to each section of the system or to the system as a whole.

(3) Where a prefabricated system is assembled off the *building* site in such a manner that it cannot be inspected and tested on site, off-site inspections and tests shall be conducted.

(4) Where a prefabricated system is installed as part of a *water system*,
(a) all other *plumbing* work shall be tested and inspected, and
(b) the complete system shall be pressure tested.

7.3.7.2. Tests of Potable Water Systems

(1) Every *potable water system* shall be capable of,
(a) withstanding without leakage a water pressure that is at least 1 000 kPa for at least 1 h, or
(b) withstanding for at least 2 h without a drop in pressure an air pressure that is at least 700 kPa.

7.3.7.3. Water Tests

(1) Where a water test is made all air shall be expelled from the system before *fixture* control valves or faucets are closed.

(2) *Potable* water shall be used to test a *potable water system*.

Section 7.4. Drainage Systems

7.4.1. Application

7.4.1.1. Application of Drainage Systems

(1) This Section applies to *sanitary drainage systems* and *storm drainage systems*.

7.4.2. Connections to Drainage Systems

7.4.2.1. Connections to Sanitary Drainage Systems

(See Appendix A.)

(1) Every *fixture* shall be *directly connected* to a *sanitary drainage system*, except that,

- (a) drinking fountains may be,
    - (i) *indirectly connected* to a *sanitary drainage system*, or
    - (ii) connected to a *storm drainage system* provided that where the system is subject to *backflow*, a *check valve* is installed in the fountain *waste pipe*,
- (b) laundry *plumbing appliances* may be *indirectly connected* to a *sanitary drainage system*,
- (c) *fixtures* or *plumbing appliances*, other than floor drains, except as provided in Sentence 7.1.4.2.(2), that discharge only *clear water waste* may be connected to a *storm drainage system*,
- (d) the following devices shall be *indirectly connected* to a *drainage system*:
    - (i) a device for the display, storage, preparation or processing of food or drink,
    - (ii) a sterilizer,
    - (iii) a device that uses water as a cooling or heating medium,
    - (iv) a water operated device,
    - (v) a water treatment device,
    - (vi) a drain or overflow from a *water system* or a heating system, or
    - r_4 (vii) a drain line from a HVAC system or equipment, and
- r_4 (e) reserved,
- r_4 (f) reserved,
- r_4 (g) reserved,

(h) floor drains within walk-in coolers shall be connected to a *sanitary drainage system*,
  (i) indirectly with an *air break*, or
  (ii) directly with a *backwater valve* installed on the *drainage system* before connection to the *sanitary building drain*.

(2) The connection of a *soil* or *waste pipe* to a *nominally horizontal soil* or *waste pipe* or to a *nominally horizontal offset* in a *soil* or *waste stack* shall be respectively at least 1 500 mm measured horizontally from the bottom of a *soil* or *waste stack* or from the bottom of the upper vertical section of the *soil* or *waste stack* that,
(a) receives a discharge of 30 or more *fixture units*, or
(b) receives a discharge from *fixtures* located on 2 or more *storeys*.

(3) No other *fixture* shall be connected to a lead bend or stub that serves a water closet.

(4) A *soil* or *waste pipe* that serves more than one clothes washer, and in which pressure zones are created by detergent suds, shall not serve for connecting other *soil* or *waste pipes*. (See Appendix A.)

7.4.2.2. Connection of Overflows from Rainwater Tanks

(1) An overflow from a rainwater tank shall not be *directly connected* to a *storm drainage system*.

7.4.2.3. Direct Connections

(1) Two or more *fixture outlet pipes* that serve outlets from a single *fixture* that is listed in Clause 7.4.2.1.(1)(d) may be *directly connected* to a *branch* that,
(a) has a *size* of at least 1¼ in., and
(b) is terminated above the *flood level rim* of a *directly connected fixture* with a minimum diameter waste of 1½ in. to form an *air break*.

(2) *Fixture drains* from *fixtures* that are listed in Subclauses 7.4.2.1.(1)(d)(i) and (ii) may be *directly connected* to a pipe that,
(a) is terminated to form an *air break* above the *flood level rim* of a *fixture* that is *directly connected* to a *sanitary drainage system*, and
(b) is extended through the roof when *fixtures* that are on 3 or more *storeys* are connected to it.

(3) *Fixture drains* from *fixtures* that are listed in Subclauses 7.4.2.1.(1)(d)(iii) to (vi) may be *directly connected* to a pipe that,

(a) is terminated to form an *air break* above the *flood level rim* of a *fixture* that is *directly connected* to a *storm drainage system*, and

(b) is extended through the roof when *fixtures* that are on 3 or more *storeys* are connected to it.

(4) Every *waste pipe* carrying waste from a device for the display, storage, preparation or processing of food or drink, shall be trapped and have a minimum diameter equal to the diameter of the drain outlet from the device.

7.4.3. Location of Fixtures

7.4.3.1. Plumbing Fixtures

(1) *Sanitary units*, bathtubs and shower baths shall not be installed adjacent to wall and floor surfaces that are pervious to water.

7.4.3.2. Restricted Locations of Indirect Connections and Traps

(1) Indirect connections or any *trap* that may overflow shall not be located in a crawl space or any other unfrequented area.

7.4.3.3. Equipment Restrictions Upstream of Interceptors

(1) Except as provided in Sentence (2), equipment discharging waste with organic solids shall not be located upstream of an *interceptor*. (See Appendix A.)

(2) If a food scrap *interceptor* has been installed upstream of the grease *interceptor*, equipment discharging waste with organic solids may discharge through a grease *interceptor*.

7.4.3.4. Fixtures Located in Chemical Storage Locations

(1) A floor drain or other *fixture* located in an oil transformer vault, a high voltage room or any room where flammable, dangerous or toxic chemicals are stored or handled shall not be connected to a *drainage system*.

7.4.3.5. Macerating Toilet System

(1) A maceration toilet system shall only be installed,
(a) where no connection to a gravity *sanitary drainage system* is available, and
(b) in accordance with the manufacturer's instructions.

7.4.3.6. Drains Serving Elevator Pits

m₅ **(1)** If a floor drain is provided in an elevator pit, it shall be installed in accordance with Section 2.7. of the ASME A17.1 / CSA-B44, "Safety Code for Elevators and Escalators".

7.4.4. Treatment of Sewage and Wastes

7.4.4.1. Sewage Treatment

(1) Where a *fixture* or equipment discharges *sewage* or waste that may damage or impair the *sanitary drainage system* or the functioning of a *sanitary sewage* works or *sanitary sewage* system, provision shall be made for treatment of the *sewage* or waste before it is discharged to the *sanitary drainage system*.

7.4.4.2. Protection for Drainage System

(1) Where a *fixture* discharges *sewage* or *clear water waste* that has been heated, the *drainage system* shall be suitable for the temperature of the *sewage* or *clear water waste* being discharged. (See Appendix A.)

7.4.4.3. Interceptors

(1) Except for *suites* of *residential occupancy*, where a *fixture* discharges *sewage* that includes fats, oils or grease and is located in an area that food is cooked, processed or prepared, it shall discharge through a grease *interceptor*. (See Appendix A.)

(2) Except as provided in Sentence (3), oil *interceptors* shall be provided as follows:
(a) service stations, repair shops and garages or any establishment where motor vehicles are repaired, lubricated or maintained shall be provided with an oil *interceptor*, and

(b) establishments which use oily or flammable liquids or have such wastes as a result of an industrial process shall be provided with an engineered oil *interceptor*.

(3) Oil *interceptors* are not required for a drain in a hydraulic elevator pit, parking lot, car wash or a garage used exclusively as a motor vehicle parking area. (See Appendix A.)

(4) Where a *fixture* discharges sand, grit or similar materials, an *interceptor* designed for the purpose of intercepting such discharges shall be installed.

(5) Every *interceptor* shall have sufficient capacity to perform the service for which it is provided.

(6) An on site constructed *interceptor* shall be constructed to the requirements of a manufactured *interceptor*.

(7) A grease *interceptor* shall be located as close as possible to the *fixture* or *fixtures* it serves.

(8) The flow rate through a grease *interceptor* shall not exceed its rated capacity and the flow rate shall be determined using the following:

$$Q=(\sum_{1}^{N}(0.75\frac{V}{DDT}))+PD$$

where:

Q	is the flow rate to a grease *interceptor* in L/s.
V	is the volume of the *fixture* in L.
DDT	is the drain down time, 60 or 120 seconds
PD	is any pump discharge in L/s.
N	is the number of *fixtures* to go through the *interceptor*.

(See Appendix A.)

(9) All grease and oil *interceptors* shall have an internal flow control and where the head will exceed five feet, a secondary flow control shall be required.

(10) Floor drains that conform to Sentence 7.4.5.1.(3) are not required to be separately trapped and vented, and may be gang trapped when discharging through an oil *interceptor*.

7.4.4.4. Neutralizing and Dilution Tanks

(1) Where a *fixture* or equipment discharges corrosive or acid waste, it shall discharge into a neutralizing or diluting tank that is connected to the *sanitary drainage system* through,
(a) a *trap*, or
(b) *indirect connection*.
(See Appendix A.)

(2) Each neutralizing or diluting tank shall have a method for neutralizing the liquid.

7.4.5. Traps

7.4.5.1. Traps for Sanitary Drainage Systems

(See Appendix A.)

(1) Except as provided in Sentences (2) and (3) and Article 7.4.5.2., every *fixture* shall be protected by a separate *trap*.

(2) One *trap* may protect,
(a) all the trays or compartments of a two or three compartment sink,
(b) a two or three compartment laundry tray, or
(c) two similar type single compartment *fixtures* located in the same room.

(3) One *trap* may serve a group of floor drains and *hub drains*, a group of shower drains, a group of washing machines or a group of laboratory sinks if the *fixtures*,
(a) are in the same room, and
(b) are not located where they can receive food or other organic matter.

(4) Reserved.

(5) A grease *interceptor* shall not serve as a *fixture trap* and each *fixture* discharging through the *interceptor* shall be trapped and vented.

(6) Where a domestic dishwashing machine equipped with a drainage pump discharges through a direct connection into the *fixture outlet pipe* of an adjacent kitchen sink or disposal unit, the pump discharge line shall,
(a) rise as high as possible to just under the counter, and
(b) connect,
  (i) on the inlet side of the sink *trap* by means of a Y fitting, or
  (ii) to the disposal unit.

7.4.5.2. Traps for Storm Drainage Systems

(1) Where a *storm drainage system* is connected to a public combined sewer, a *trap* shall be installed between any opening in the system and the drain or sewer, except that no *trap* is required if the opening is the upper end of a *leader* that terminates,
(a) at a roof that is used only for weather protection, and
(b) not less than 1 000 mm above or not less than 3.5 m in any other direction from any air inlet, openable window or door, and
(c) not less than 1 800 mm from a property line.

7.4.5.3. Connection of Subsoil Drainage Pipe to a Sanitary Drainage System (See Appendix A.)

(1) Except as permitted in Sentence (2), no foundation drain or *subsoil drainage pipe* shall connect to a *sanitary drainage system*.

(2) Where a *storm drainage system* is not available or *soil* conditions prevent drainage to a culvert or dry well, a foundation drain or *subsoil drainage pipe* may connect to a *sanitary drainage system*.

(3) Where a *subsoil drainage pipe* may be connected to a *sanitary drainage system*, the connection shall be made on the upstream side of a *trap* with a *cleanout* or a trapped sump.

7.4.5.4. Location and Cleanout for Building Traps
(See Appendix A.)

(1) Where a *building trap* is installed it shall,
(a) be provided with a *cleanout* fitting on the upstream side of and directly over the *trap*,
(b) be located upstream of the *building cleanout*, and

(c) be located,
  (i) inside the *building* as close as practical to the place where the *building drain* leaves the *building*, or
  (ii) outside the *building* in a manhole.

7.4.5.5. Trap Seals

(1) Provision shall be made for maintaining the *trap* seal of a floor drain or a *hub drain* by the use of a *trap* seal primer, by using the drain as a receptacle for an *indirectly connected* drinking fountain, or by equally effective means. (See Appendix A.)

(2) Where a mechanical device is installed to furnish water to a *trap*, the pipe or tube conveying water from the device to the *trap* shall be at least 3/8 in. inside diameter.

7.4.6. Arrangement of Drainage Piping

7.4.6.1. Separate Systems

(1) No vertical *soil* or *waste pipe* shall conduct both *sanitary sewage* and *storm sewage*.

(2) There shall be no unused open ends in a *drainage system* and *dead ends* shall be so graded that water will not collect in them.

7.4.6.2. Location of Soil or Waste Pipes

(1) A *soil* or *waste pipe* shall not be located directly above,
(a) non-pressure *potable* water storage tanks,
(b) manholes in pressure *potable* water storage tanks, or
(c) food-handling or processing equipment.

7.4.6.3. Sumps or Tanks (See Appendix A.)

(1) Only piping that is too low to drain into a *building sewer* by gravity shall be drained to a sump or receiving tank.

(2) Where the sump or tank receives *sanitary sewage* it shall be water and air-tight and shall be vented.

(3) Equipment such as a pump or ejector that can lift the contents of the sump or tank and discharge it into the *sanitary building drain* or *sanitary building sewer* shall be installed.

(4) Where the equipment does not operate automatically the *capacity* of the sump shall be sufficient to hold at least a 24 hours accumulation of liquid.

(5) Where there is a *building trap* the discharge pipe from the equipment shall be connected to the *sanitary building drain* downstream of the *trap*.

(6) The discharge pipe from every pumped *sanitary sewage* sump shall be equipped with a union, a *check valve* and a shut-off valve installed in that sequence in the direction of discharge.

(7) The discharge piping from a pump or ejector shall be sized for optimum flow velocities at pump design conditions.

(8) The discharge pipe from every pumped *storm sewage* sump shall be equipped with,
(a) a union and a *check valve* installed in that sequence in the direction of discharge and pumped to above grade level, or
(b) a union, a *check valve* and a shut off valve installed in that sequence in the direction of discharge.

7.4.6.4. Protection from Backflow

(1) Except as permitted in Sentence (2), a *backwater valve* that would prevent free circulation of air shall not be installed in a *building drain* or in a *building sewer*.

(2) A *backwater valve* may be installed in a *building drain* provided that,
(a) it is a "normally open" design conforming to,
    (i) CAN/CSA-B70, "Cast Iron Soil Pipe, Fittings, and Means of Joining",
m_5 (ii) CAN/CSA-B181.1, "Acrylonitrile-Butadiene-Styrene (ABS) Drain, Waste, and Vent Pipe and Pipe Fittings"
m_5 (iii) CAN/CSA-B181.2, "Polyvinylchloride (PVC) and Chlorinated Polyvinylchloride (CPVC) Drain, Waste, and Vent Pipe and Pipe Fittings", or
    (iv) CAN/CSA-B182.1, "Plastic Drain and Sewer Pipe and Pipe Fittings", and

(b) it does not serve more than one *dwelling unit*.

(3) Except as provided in Sentences (4) and (5), where a *building drain* or a *branch* may be subject to *backflow*, a *backwater valve* shall be installed on every *fixture drain* connected to them when the *fixture* is located below the level of the adjoining street.

(4) Where more than one *fixture* is located on a *storey* and all are connected to the same *branch*, the *backwater valve* may be installed on the *branch*.

(5) A *subsoil drainage pipe* that drains into a *sanitary drainage system* that is subject to surcharge shall be connected in such a manner that *sewage* cannot back up into the *subsoil drainage pipe*. (See Appendix A.)

7.4.6.5. Mobile Home Sewer Service

(1) A *building sewer* intended to serve a mobile home shall,
(a) be not less than 4 in. in *size*,
(b) be terminated above ground,
(c) be provided with,
  (i) a tamperproof terminal connection that is capable of being repeatedly connected, disconnected and sealed,
  (ii) a protective concrete pad, and
  (iii) a means to protect it from frost heave, and
(d) be designed and constructed in accordance with good engineering practice.

7.4.6.6. Building Drain Ends

(1) Where a *building drain* enters a *building* above the elevation of the bottom of the wall of a *building*, the *building drain* may be deemed to terminate at the first point that the drainage pipe changes direction from the horizontal to the vertical.

7.4.7. Cleanouts

7.4.7.1. Cleanouts for Drainage Systems

(1) Every *sanitary drainage system* and *storm drainage system* shall be provided with *cleanouts* that will permit cleaning of the entire system.

(2) A *cleanout* fitting shall be provided on the upstream side and directly over every running *trap*.

(3) Every interior *leader* shall be provided with a *cleanout* fitting at the bottom of the *leader* or not more than 1 000 mm upstream from the bottom of the *leader*.

(4) Where a *cleanout* is required on a *building sewer* 8 in. or larger in *size*, it shall be a manhole.

(5) Where there is a change of direction greater than 45° in a *sanitary building drain* or a *sanitary building sewer*, a *cleanout* shall be installed at each change in direction.

(6) Every *sanitary building drain* or *storm building drain* shall be provided with a *cleanout* fitting that is located as close as practical to the place where the drain leaves the *building*. (See Appendix A.)

(7) Every *soil* or *waste stack* shall be provided with a *cleanout* fitting,
(a) at the bottom of the stack,
(b) not more than 1 000 mm upstream of the bottom of the stack, or
(c) on a Y fitting connecting the stack to the *building drain* or *branch*.

(8) A *cleanout* shall be provided to permit the cleaning of the piping immediately downstream of an *interceptor*.

(9) Every indirect drainage pipe carrying waste from a food receptacle shall have a *cleanout* access at every change of direction of more than 45°. (See Appendix A.)

(10) A *cleanout* shall be installed on a *fixture drain* serving a kitchen sink. (See Appendix A.)

7.4.7.2. Size and Spacing of Cleanouts

(1) Except as provided in Sentences (2) and (3), on drainage piping of 4 in. *size* and smaller, the minimum *size cleanout* opening shall be the same *size* as the drainage pipe and on drainage piping larger than the 4 in. *size*, the *cleanout* opening shall be 4 in. or larger and the maximum spacing between *cleanouts* on horizontal pipe shall be,
(a) in the case of a sink *waste pipe*, 6 m,
(b) in the case of a horizontal *sanitary drainage pipe*, or *storm drainage pipe*, other than a *waste pipe* from a sink, 15 m, and

(c) in the case of a horizontal *sanitary drainage pipe* or *storm drainage pipe* larger than 4 in. *size*, 30 m.

(2) The spacing between manholes serving a *building sewer*,
(a) 24 in. or less in *size* shall not exceed 90 m, and
(b) over 24 in. in *size* shall not exceed 150 m.

(3) The *developed length* of a *building sewer* between the *building* and the first manhole to which the *building sewer* connects shall not exceed 30 m.

(4) *Cleanouts* that allow rodding in one direction only shall be installed to permit rodding in the direction of flow.

(5) Manholes shall be located at all junctions, all changes in grade, *size* or alignment (except for curvilinear alignment) on a *sanitary building sewer* that is 8 in. or larger in *size*.

r_4 **(6)** Manholes shall be located at changes of grade, *size* or alignment (except for curvilinear alignment) on a *storm building sewer* or exterior *storm drainage pipe* that is 8 in. or larger in *size*.

7.4.7.3. Manholes

(1) A manhole including the cover shall be designed to support all loads imposed upon it.

(2) A manhole shall be provided with,
(a) a cover which shall provide an airtight seal if located within a *building*,
(b) a rigid ladder of a corrosion-resistant material where the depth exceeds 1 000 mm, and
(c) a vent to the exterior if the manhole is located within a *building*.

(3) A manhole shall have a minimum horizontal dimension of 1 200 mm, except that the top 1 500 mm may be tapered from 1 200 mm down to a minimum of 600 mm at the top.

(4) A manhole in a *sanitary drainage system* shall be channelled to direct the flow of effluent.

7.4.7.4. Location of Cleanouts

(1) *Cleanouts* and access covers shall be located so that the openings are readily *accessible* for drain cleaning purposes. (See Appendix A.)

(2) A *cleanout* shall not be located in a floor assembly in a manner that may constitute a hazard and shall not be used as a floor drain.

(3) Reserved.

(4) Each change of direction of the piping between a *cleanout* fitting and the drainage piping or *vent piping* that is serves shall be accomplished by using 45° bends.

(5) A *cleanout* shall be provided to serve vertical drainage piping from a wall hung urinal and shall extend above the *flood level rim* of the *fixture*.

(6) A *cleanout* serving a *fixture* in health care facilities, mortuaries, laboratories and similar *occupancies*, where contamination by body fluids is likely, shall be located a minimum of 150 mm above the *flood level rim* of the *fixture*.

7.4.8. Minimum Slope and Length of Drainage Pipes

7.4.8.1. Minimum Slope

(1) Except as provided in Sentences (2) and (3), every drainage pipe that has a *size* of 3 in. or less, and every *fixture drain* shall have a downward slope in the direction of flow of at least 1 in 50. (See Appendix A.)

(2) Sentence (1) does not apply to a *force main*.

(3) Where it is not possible to comply with Sentence (1), a lesser slope may be used if it will produce a gravity flow of not less than 0.6 m per second.

7.4.8.2. Length of Fixture Outlet Pipes

(1) Except for *fixture outlet pipes* installed in conformance with Sentence 7.4.5.1.(3), the *developed length* of every *fixture outlet pipe* shall not exceed 1 200 mm.

7.4.9. Size of Drainage Pipes

7.4.9.1. No Reduction in Size

(1) Except as permitted in Sentence (3), no drainage pipe that is of minimum *size* required by this Part for the purpose for which it is installed shall be so connected as to drain to other drainage pipe of lesser *size*.

(2) Where a *building drain* connects to a stack through a wall or floor, the drain shall retain its full *size* through the wall or floor.

(3) A *sanitary drainage pipe* may be connected to a pre-engineered waste water heat recovery system that incorporates piping of a lesser *size* than required by Sentence (1) provided that it does not convey *sewage*,
(a) from a *sanitary unit*, or
(b) that contains solids.

7.4.9.2. Serving Water Closets

(1) The *size* of every drainage pipe that serves a water closet shall be at least 3 in.

(2) The *size* of every horizontal drainage pipe downstream of the third water closet *fixture drain* connection shall be at least 4 in.

(3) The *size* of every *soil stack* that serves more than 6 water closets shall be at least 4 in.

(4) The discharge pipe serving a macerating toilet shall be not less than 3/4 in. *size* with a hydraulic load of 4 *fixture units*.

7.4.9.3. Size of Fixture Outlet Pipes

(1) Except as provided in Sentence (2) the *size* of every *fixture outlet pipe* shall conform to Table 7.4.9.3. (See Appendix A.)

(2) The part of the *fixture outlet pipe* that is common to 3 compartments of a sink shall be one *size* larger than the largest *fixture outlet pipe* of the compartments that it serves.

Table 7.4.9.3.
Minimum Permitted Size of Fixture Outlet Pipe and Hydraulic Loads for Fixtures

Forming Part of Sentences 7.4.9.3.(1) and 7.4.10.2.(1)

Fixture	Minimum *Size* of *Fixture Outlet Pipe*, in.	Hydraulic Load, *fixture units*
Autopsy table	1½	2
Bathroom group		
(a) with flush tank		6
(b) with direct flush valve		8
Bathtub (with or without shower)	1½	1½
Bath: foot, sitz or slab	1½	1½
Bed pan washer	3	6
Beer cabinet	1½	1½
Bidet	1¼	1
Chinese range	1½	3
Clothes washer		
(a) domestic	N/A	1½ with 1½ in. *trap*
(b) commercial	N/A	2 with 1½ in. *trap*
Cup sinks	1¼	½
Dental unit or cuspidor	1¼	1
Dishwasher		
(a) domestic	1½	1 (no load if connected to garbage grinder or domestic sink)
(b) commercial type	2	3
Drinking fountain	1¼	½
Fish tank or tray	1½	1½
Floor drain	2	2 with 2 in. *trap* 3 with 3 in. *trap*
Garbage grinder, commercial type	2	3
Icebox	1¼	1
Laundry tray		
(a) single or double units or 2 single units with common *trap*	1½	1½
(b) 3 compartments	1½	2
Column 1	2	3

Table 7.4.9.3. (Cont'd)
Minimum Permitted Size of Fixture Outlet Pipe and Hydraulic Loads for Fixtures

Forming Part of Sentences 7.4.9.3.(1) and 7.4.10.2.(1)

Fixture		Min. *Size of Fixture Outlet Pipe*, in.	Hydraulic Load, *fixture units*
Lavatory			
(a)	barber or beauty parlor	1½	1½
(b)	dental	1¼	1
(c)	domestic type single, or 2 single with common *trap*	1¼	1 with 1¼ in. *trap*
			1½ with 1½ in. *trap*
(d)	multiple or industrial type	1½	3
Macerating Toilet System for single bathroom		See Sentence 7.4.9.2.(4)	4
Potato Peeler		2	3
Shower drain			
(a)	from 1 head	1½	1½
(b)	from 2 or 3 heads	2	3
(c)	from 4 to 6 heads	3	6
Sink			
(a)	domestic and other small type with or without garbage grinders, single, double or 2 single with a common *trap*	1½	1½
(b)	other sinks	1½	1½ with 1½ in. *trap*
			2 with 2 in. *trap*
			3 with 3 in. *trap*
Urinal			
(a)	pedestal, siphon jet or blowout type	2	4
(b)	stall, washout type	2	2
(c)	wall		
	(i) washout type	1½	1½
	(ii) other types	2	3
Water closet			
(a)	with flush tank	3	4
(b)	with direct flush	3	6
Column 1		2	3

(3) Where clothes washers do not drain to a laundry tray, the *trap* inlet shall be fitted with a vertical standpipe that is not less than 600 mm long measured from the *trap weir* and the top of the standpipe shall terminate above the *flood level rim* of the clothes washer it serves. (See Appendix A.)

7.4.9.4. Minimum Size of Building Drains and Sewers

(1) Every *sanitary building drain* and every *sanitary building sewer* shall be at least 4 in. *size*.

(2) Every *storm building drain* and every *storm building sewer* shall be at least 4 in. *size*.

7.4.10. Hydraulic Loads

7.4.10.1. Total Load on a Pipe

(1) The hydraulic load on a pipe is the total load from,
(a) every *fixture* that is connected to the system upstream of the pipe,
(b) every *fixture* for which provision is made for future connection upstream of the pipe, and
(c) all roofs and paved surfaces that drain into the system upstream of the pipe.

7.4.10.2. Hydraulic Loads for Fixtures

(1) The hydraulic load from a *fixture* that is listed in Table 7.4.9.3. is the number of *fixture units* set forth in the Table.

(2) Except as provided in Sentence (1), the hydraulic load from a *fixture* that is not listed in Table 7.4.9.3. is the number of *fixture units* set forth in Table 7.4.10.2. for the *trap* of the *size* that serves the *fixture*.

Table 7.4.10.2.
Permitted Hydraulic Load from a Fixture Based on Size of Trap
Forming Part of Sentence 7.4.10.2.(2)

Size of *Trap*, in.	Hydraulic Load, *fixture units*
1¼	1
1½	2
2	3
2½	4
3	5
4	6
Column 1	2

7.4.10.3. Hydraulic Loads from Fixtures with Continuous or Semi-continuous Flow

(1) Except as provided in Sentence (2), the hydraulic load from a *fixture* that produces a continuous flow, such as a pump or an *air-conditioning fixture*, is 31.7 *fixture units* for each litre per second of flow.

(2) Where a *fixture* or equipment that produces a continuous or semi-continuous flow drains to a *storm drainage system*, the hydraulic load from the *fixture* is 900 litres for each litre per second of flow.

(3) The hydraulic load from a *fixture* or equipment that produces a semi-continuous flow shall conform to Table 7.4.10.3.

Table 7.4.10.3.
Maximum Permitted Hydraulic Load from Fixtures with Semi-continuous Flows
Forming Part of Sentence 7.4.10.3.(3)

Maximum Permitted Flows by *Trap Size*		
Trap Size, in.	Flow, L/s	Hydraulic Load, *fixture units*
1½	0.00 - 0.090	3
2	0.091 - 0.190	6
3	0.191 - 0.850	27
4	0.851 - 5.700	180
Column 1	2	3

7.4.10.4. Hydraulic Loads from Roofs or Paved Surfaces (See Appendix A.)

(1) Except as provided in Sentence (2), the hydraulic load in litres from a roof or paved surface is the maximum 15 min rainfall determined in conformance with Supplementary Standard SB-1, multiplied by the sum of,
(a) the area in square metres of the horizontal projection of the surface drained, and
(b) one-half the area in square metres of the largest adjoining vertical surface.

(2) *Flow control roof drains* may be installed provided,
(a) the maximum drain down time does not exceed 24 h,
(b) the roof structure has been designed to carry the load of the accumulated water,
(c) one or more scuppers are installed so that the maximum depth of water on the roof cannot exceed 150 mm,
(d) they are located not more than 15 m from the edge of the roof and not more than 30 m from adjacent drains, and
(e) there is at least one drain for each 900 m^2.

7.4.10.5. Conversion of Fixture Units to Litres and Gal/min

(1) Except as provided in Sentence 7.4.10.3.(2), where the hydraulic load is to be expressed in litres, *fixture units* shall be converted as follows:

(a) when the number of *fixture units* is 260 or fewer, the load is 2 360 L, and

(b) when the number of *fixture units* exceeds 260, the load is 9.1 L for each *fixture unit*.

(2) Where the hydraulic load is to be expressed in gal/min, *fixture units* shall be converted in accordance with Table 7.4.10.5.

Table 7.4.10.5.
Maximum Probable Drainage Rate, gal/min
Forming Part of Sentences 7.4.10.3.(1), 7.4.10.5.(2)

Fixture Units in Service	*Fixture Units* Col. 1	*Fixture Units* Col. 1 x 10	*Fixture Units* Col. 1 x 100
100	53	174	900
90	51	164	835
80	49	153	750
70	47	140	680
60	44	128	600
50	41	115	520
40	38	102	435
30	33	88	350
20	27	72	262
10	21	53	174
Column 1	2	3	4

Notes to Table 7.4.10.5.:
(See Appendix A.)

7.4.10.6. Hydraulic Loads to Soil or Waste Pipes

(1) Except as provided in Sentences (2) and (4), the hydraulic load that is drained to every *soil or waste stack* shall conform to Table 7.4.10.6.A.

Table 7.4.10.6.A.
Maximum Permitted Hydraulic Load Drained to Soil-or-Waste Stack
Forming Part of Sentence 7.4.10.6.(1)

Pipe *Size*, in.	Maximum Hydraulic Load, *fixture units*	Maximum *Fixture Units* Drained from any one *Storey*
1¼	2	2
1½	8	5
2	24	10
3	102	18
4	540	100
5	1 400	250
6	2 900	500
8	7 600	830
10	15 000	2 700
12	26 000	4 680
15	50 000	9 000
Column 1	2	3

r_4 **(2)** Where the *nominally horizontal offset* in a *soil* or *waste stack* is 1 500 mm or more, the hydraulic load that is served by it shall conform to Table 7.4.10.8.

(3) Vertical *sanitary drainage pipe* shall be designed to carry no more than 29% of its full capacity.

(4) No vertical *waste pipe*, *branch* or *stack* of less than 3 in. diameter shall have a hydraulic load in excess of that permitted by Table 7.4.10.6.B.

Table 7.4.10.6.B.
Maximum Load on Vertical Drainage Pipe, Fixture Units
Forming Part of Sentence 7.4.10.6.(4)

Pipe *Size*, in.	Stack Height 3 *Storeys* or Less	Stack Height More than 3 *Storeys*	For Each *Storey* in Stack of More than 3 *Storeys*
1¼	2	2	2
1½	8	8	5
2	16	24	10
Column 1	2	3	4

7.4.10.7. Hydraulic Loads on Branches

(1) No horizontal *sanitary drainage pipe* of less than 3 in. *size* shall have a *fixture* loading in excess of that permitted by Table 7.4.10.7.

Table 7.4.10.7.
Maximum Permitted Hydraulic Load Drained to a Branch
Forming Part of Sentence 7.4.10.7.(1)

Size of *Branch*, in.	Maximum Load, *fixture units*
1¼	2
1½	4
2	6
Column 1	2

7.4.10.8. Hydraulic Loads on Sanitary Horizontal Drain

(1) Except as permitted by Article 7.4.10.7., the hydraulic load that is drained to a horizontal *sanitary drainage pipe* shall conform to Table 7.4.10.8., based on the *size* and slope.

(2) Horizontal *sanitary drainage pipe* shall be designed to carry no more than 65% of its full capacity.

Table 7.4.10.8.
Maximum Permitted Hydraulic Load Drained to a Horizontal Sanitary Drainage Pipe
Forming Part of Sentences 7.4.10.3.(1), 7.4.10.6.(2) and 7.4.10.8.(1)

Drain *Size*, Nominal in.	Maximum Hydraulic Load, *fixture units*					
	Slope(1)					
	1:400	1:200	1:133	1:100	1:50	1:25
3	---	---	---	---	27	36
4	---	---	---	180	240	300
5	---	---	380	390	480	670
6	---	---	600	700	840	1 300
8	---	1 400	1 500	1 600	2 250	3 370
10	---	2 500	2 700	3 000	4 500	6 500
12	2 240	3 900	4 500	5 400	8 300	13 000
15	4 800	7 000	9 300	10 400	16 300	22 500
Column 1	2	3	4	5	6	7

Notes to Table 7.4.10.8.:

(1) Slope is the ratio of rise to run, in whatever measurement units are chosen.

7.4.10.9. Hydraulic Loads on Horizontal Storm Drains

(1) The hydraulic load that is drained to a horizontal *storm drainage pipe* shall conform to Table 7.4.10.9., based on the *size* and slope.

r_4

Table 7.4.10.9.
Maximum Permitted Hydraulic Load Drained to a Horizontal Storm Drainage Pipe

Forming Part of Sentences 7.4.10.9.(1) and 7.4.10.10.(2)

Size of Drain or Sewer, in.	Maximum Hydraulic Load, L						
	Slope[1]						
	1 in 400	1 in 200	1 in 133	1 in 100	1 in 68	1 in 50	1 in 25
3	------	------	------	------	2 390	2 770	3 910
4	------	------	------	4 220	5 160	5 970	8 430
5	------	------	6 760	7 650	9 350	10 800	15 300
6	------	------	10 700	12 400	15 200	17 600	24 900
8	------	18 900	23 200	26 700	32 800	37 800	53 600
10	------	34 300	41 900	48 500	59 400	68 600	97 000
12	37 400	55 900	68 300	78 700	96 500	112 000	158 000
15	71 400	101 000	124 000	143 000	175 000	202 000	287 000
Col. 1	2	3	4	5	6	7	8

Notes to Table 7.4.10.9.:

(1) Slope is the ratio of rise to run, in whatever measurement units are chosen.

7.4.10.10. Rain Leaders

(1) No change in the *size* of a rain *leader* with a *nominally horizontal offset* is required if the *offset*,
(a) is located immediately under the roof,
(b) is not more than 6 m long, and
(c) has a slope not less than 1 in 50.

(2) If the horizontal *offset* is more than 6 m long, the rain *leader* shall conform to Table 7.4.10.9.

(3) The hydraulic load that is drained to a rain *leader* shall conform to Table 7.4.10.10.

Table 7.4.10.10.
Maximum Permitted Hydraulic Load Drained to a Circular Rain Leader
Forming Part of Sentence 7.4.10.10.(3)

Size, in.	Maximum Hydraulic Load, L
2	1 700
2½	3 070
3	5 000
4	1 0800
5	19 500
6	31 800
8	68 300
Column 1	2

Section 7.5. Venting Systems

7.5.1. Vent Pipes for Traps

7.5.1.1. Venting for Traps

(1) Except as provided in Sentences (3) and (4), every *trap* shall be protected by a *vent pipe*.

(2) *Drainage systems* shall be protected by the installation of a system as provided in Subsections 7.5.4. and 7.5.5. by the installation of,
(a) *additional circuit vents*,
(b) *branch vents*,
(c) *circuit vents*,
(d) *continuous vents*,
(e) *dual vents*,
(f) *fresh air inlets*,
(g) *headers*,
(h) *individual vents*,
(i) *offset relief vents*,
(j) *relief vents*,
(k) *stack vents*,
(l) *vent stacks*,
(m) *wet vents*, or
(n) *yoke vents*.

(3) A *trap* that serves a floor drain or *hub drain* need not be protected by a *vent pipe* separately where,
(a) the *size* of the *trap* is not less than 3 in.,
(b) the length of the *fixture drain* is not less than 450 mm,
(c) the fall on the *fixture drain* does not exceed its *size*, and
(d) the *trap* is connected to a horizontal drainage pipe that terminates at its upstream end in a 3 in. *stack*.
(See Appendix A.)

(4) A *trap* need not be protected by a *vent pipe*,
(a) where it serves,
  (i) a *subsoil drainage pipe*, or
  (ii) a *storm drainage system*, or
(b) where it forms part of an indirect *drainage system*.
(See Appendix A.)

7.5.2. Wet Venting

7.5.2.1. Wet Venting (See Appendix A.)

(1) A *soil* or *waste pipe* may serve as a *wet vent* provided that,
(a) the hydraulic load is in accordance with Table 7.5.8.1.,
(b) the number of wet vented water closets does not exceed 2,
(c) when 2 water closets are installed, they are connected at the same level to a vertical part of the stack by means of a double fitting in accordance with Table 7.2.4.5.,
(d) the water closets are installed downstream of all other *fixtures*,
r_4 (e) *trap arms* and *fixture drains* connected to the *wet vent* do not exceed 2 in. in *size*, except for connections from floor drains in accordance with Clauses 7.5.1.1.(3)(a) to (c),
(f) the total hydraulic load on the *wet vent* does not exceed the limits stated in Table 7.5.8.1. when separately vented *branches* or *fixture drains* in the same *storey*, having a total hydraulic load not greater than 2 *fixture units*, are connected to a *wet vent* or a wet vented water closet *trap arm*,
(g) the hydraulic load to be considered when sizing a *continuous vent*, that serves a *wet vent* only includes the hydraulic load that is wet vented,
(h) when a *wet vent* extends through more than one *storey*, the total discharge from any one *storey* above the *first storey* does not exceed 4 *fixture units*,

(i) there is not more than one *nominally horizontal offset* in the *wet vent*, and,
    (i) the *offset* does not exceed 1 200 mm for pipes 2 in. or less in *size*, or
    (ii) the *offset* does not exceed 2 500 mm for pipes larger than 2 in. in *size*,

r_4 (j) the wet vented portion is not reduced in *size* except for the portion that is upstream of floor drains in accordance with Clauses 7.5.1.1.(3)(a) to (c), and

(k) the length of the *wet vent* is not limited.

7.5.3. Circuit Venting

7.5.3.1. Circuit Venting (See Appendix A.)

(1) A section of a *horizontal branch* may be *circuit vented* provided,
(a) a *circuit vent* is connected to it,
(b) all *fixtures* serve by the *circuit vent* are located in the same *storey* and located at the most distant upstream section of the *horizontal branch*, and
(c) no *soil* or *waste stack* is connected to it upstream of a circuit vented *fixture*.

(2) *Fixtures* with *fixture outlet pipes* less than 2 in. in *size* shall be separately vented or separately circuit vented.

(3) Except as provided in Sentences (4) and (5), a *relief vent* shall be connected to the *branch* that forms part of a circuit vented system, downstream of the connection of the most downstream circuit vented *fixture*.

(4) A *soil* or *waste pipe* having a hydraulic load not greater than 6 *fixture units* may act as a *relief vent* for a *branch* that is being circuit vented.

(5) A symmetrically connected *relief vent* may serve as a combined *relief vent* for a maximum of 2 *branches* that are circuit vented, provided there are not more than 8 circuit vented *fixtures* connected between the combined *relief vent* and each *circuit vent*.

(6) *Additional circuit vents* shall be required,
(a) when each cumulative horizontal change in direction of a *branch* served by a *circuit vent* exceeds 45° between *vent pipe* connections, or
(b) where more than 8 circuit vented *fixtures* are connected to a *branch* between *vent pipe* connections.

(7) A *soil* or *waste pipe* may serve as an *additional circuit vent* in accordance with Sentence (6) provided that the *soil* or *waste pipe* is sized as a *wet vent* in conformance with Article 7.5.8.1. and is not less than 2 in. in *size*.

(8) Connections to *circuit vents* and *additional circuit vents* in accordance with Sentence (6) shall conform to Sentence 7.5.4.5.(1).

(9) A circuit vented *branch*, including the *fixture drain* downstream of the *circuit vent* connection, shall be sized in accordance with Articles 7.4.10.7. and 7.4.10.8., except that it shall be not less than,
(a) 2 in., where *traps* less than 2 in. in *size* are circuit vented, or
(b) 3 in., where *traps* 2 in. in *size* or larger are circuit vented.

(10) *Additional circuit vents* shall be sized in accordance with Table 7.5.7.1. and Sentence 7.5.7.3.(1).

(11) The hydraulic load on a *circuit vent* shall include the hydraulic load from *fixtures* connected to the *branch* served by the *circuit vent*, but shall not include the hydraulic load from *fixtures* permitted by Sentences (3), (4) and (5).

7.5.4. Vent Pipes for Soil or Waste Stacks

7.5.4.1. Stack Vents

(1) The upper end of every *soil* or *waste stack* shall terminate in a *stack vent* and the *stack vent* shall terminate in *open air* outside the *building*, or connect directly or through a *header* to another *stack vent* or *vent stack* that does terminate in *open air* outside the *building*.

7.5.4.2. Vent Stacks

(1) Except as provided in Sentence (2), every *soil* or *waste stack* greater than 4 *storeys* in height shall have a *vent stack*.

(2) A *soil* or *waste stack* that serves as a *wet vent* does not require a *vent stack*.

(3) The *vent stack* required by Sentence (1) shall be connected to a vertical section of the *soil* or *waste stack* at or immediately below the lowest *soil* or *waste pipe* connected to the *soil* or *waste stack*.

(4) *Fixtures* may be connected to a *vent stack* provided,
(a) the total hydraulic load of the connected *fixtures* does not exceed 8 *fixture units*,
(b) at least one *fixture* is connected to a vertical portion of the *vent stack* and upstream of any other *fixtures*,
(c) no other *fixture* is connected downstream of a water closet,
(d) all *fixtures* are located in the lowest *storey* served by the *vent stack*, and
(e) the section of the *vent pipe* that acts as a *wet vent* conforms to the requirements regarding *wet vents*.

7.5.4.3. Yoke Vents (See Appendix A.)

(1) Except as provided in Sentence (4), where a *soil* or *waste stack* receives the discharge from *fixtures* located on more than 11 *storeys*, a *yoke vent* shall be,
(a) installed for each section of 5 *storeys* or part of them counted from the top down,
(b) installed at or immediately above each *offset* or double *offset*, and
(c) sized in accordance with Sentence 7.5.7.5.(1).

(2) The *yoke vent* shall be connected to the *soil* or *waste stack* by means of a drainage fitting at or immediately below the lowest *soil* or *waste pipe* from the lowest *storey* of the sections described in Sentence (1).

(3) The *yoke vent* shall connect to the *vent stack* at least 1 000 mm above the floor level of the lowest *storey* in the section described in Sentence (1).

(4) A *yoke vent* need not be installed provided the *soil* or *waste stack* is interconnected with the *vent stack* in each *storey* of the section in which *fixtures* are located by means of a *vent pipe* equal in *size* to the *branch* or *fixture drain* or 2 in. in *size*, whichever is smaller.

7.5.4.4. Offset Relief Vents (See Appendix A.)

(1) A *soil* or *waste stack* that has a *nominally horizontal offset* more than 1 500 mm long and above which the upper vertical portion of the stack passes through more than 2 *storeys* and receives a hydraulic load of more than 100 *fixture units* shall be vented by an *offset relief vent* connected to the vertical section immediately above the *offset*, and by another *offset relief vent*,
(a) connected to the lower vertical section at or above the highest *soil* or *waste pipe* connection, or
(b) extended as a vertical continuation of the lower section.

7.5.4.5. Fixtures Draining Into Vent Pipes

r4 **(1)** The *trap arm* of a *fixture* that has a hydraulic load of not more than 1½ *fixture units* may be connected to the vertical section of a *circuit vent*, *additional circuit vent*, *offset relief vent* or *yoke vent*, provided that,
(a) not more than 2 *fixtures* are connected to the *vent pipe*,
r4 (b) where 2 *fixtures* are connected to the *vent pipe*, the connection is by means of a double fitting, in accordance with Table 7.2.4.5., and
(c) the section of the *vent pipe* that acts as a *wet vent* conforms to the requirements regarding *wet vents*.

7.5.5. Miscellaneous Vent Pipes

7.5.5.1. Venting of Sanitary Sewage Sumps

(1) Every sump or tank that receives *sanitary sewage* shall be provided with a *vent pipe* that is connected to the top of the sump or tank.

7.5.5.2. Venting of Interceptors

(1) Every oil *interceptor* shall be provided with 2 *vent pipes* that,
(a) connect to the *interceptor* at opposite ends,
(b) extend independently to *open air*,
(c) terminate not less than 2 000 mm above ground and at elevations differing by at least 300 mm, and
(d) do not connect to each other or any other *vent pipe*.

(2) Adjacent compartments within every oil *interceptor* shall be connected to each other by a *vent* opening.

(3) Where a secondary receiver for oil is installed in conjunction with an oil *interceptor*, it shall be vented in accordance with the manufacturer's recommendations, and the *vent pipe* shall,
(a) in no case be less than 1½ inch in *size*,
(b) extend independently to *open air*, and
(c) terminate not less than 2 000 mm above ground.

(4) The *vent pipes* referred to in Sentence (1) are permitted to be one *size* smaller than the largest connected drainage pipe but not less than 1¼ in. in *size*, or can be sized in accordance with the manufacturer's recommendations.

(5) Every *vent pipe* that serves an oil or grease *interceptor* and is located outside a *building* shall be not less than 3 in. in *size* in areas where it may be subject to frost closure.

(6) Every grease *interceptor* shall have a *vent pipe* that is not less than 1½ in. *size* connected to the outlet pipe, that connects to the *plumbing venting system*.

(7) A *vent pipe* shall be provided within 1 500 mm of the inlet to a grease *interceptor* complete with a *cleanout* to provide cleaning of the *vent pipe*.

(8) Where an acid waste dilution tank is installed, it shall be provided with a *vent pipe* connected at the top of the tank and that is sized in accordance with Article 7.5.7.7. (See Appendix A.)

7.5.5.3. Venting of Corrosive Drain Piping and Dilution Tanks

(1) *Venting systems* for drain piping or dilution tanks conveying corrosive waste shall extend independently and terminate in *open air*. (See Appendix A.)

7.5.5.4. Fresh Air Inlets

(1) Where a *building trap* is installed, a *fresh air inlet* not less than 4 in. in *size* shall be connected upstream and within 1 200 mm of the *building trap* and downstream of any other connection.

7.5.5.5. Provision for Future Installations

(1) Where provision is made for a *fixture* to be installed in the future, the *drainage system* and *venting system* shall be sized accordingly and provision made for the necessary future connections.

(2) Except as required in Sentence 7.5.7.7.(2), where a *plumbing system* is installed in a *building*, every *storey* in which *plumbing* is or may be installed, including the basement of a single family dwelling, shall have extended into it or passing through it a *vent pipe* that is at least 1½ in. in *size* for the provision of future connections.

7.5.6. Arrangement of Vent Pipes

7.5.6.1. Drainage of Vent Pipes

(1) Every *vent pipe* shall be installed without depression in which moisture can collect.

(2) Every *waste pipe* shall be installed and *back vented* at the same time.

7.5.6.2. Vent Pipe Connections (See Appendix A.)

(1) Every *vent pipe* in a *plumbing system* shall be installed so as to be direct as possible to a *vent stack* or *open air*, as the case may be, and so that any horizontal run below the flood level of the *fixture* to which the *vent pipe* is installed is eliminated where structurally possible.

(2) Except for *wet vents*, where a *vent pipe* is connected to a *nominally horizontal soil* or *waste pipe*, the connection shall be above the horizontal centre line of the *soil* or *waste pipe*.

(3) Unused *vent pipes* installed for future connections shall be permanently capped with an end *cleanout* or an adapter and plug.

7.5.6.3. Location of Vent Pipes (See Appendix A.)

(1) Except as provided in Sentences (2) and (3), a *vent pipe* that protects a *fixture trap* shall be located so that,
(a) the *developed length* of the *trap arm* is not less than twice the *size* of the *fixture drain*,

(b) the total fall of the *trap arm* is not greater than its inside diameter, and
(c) the *trap arm* does not have a cumulative change in direction of more than 135°.

(2) The *trap arm* of water closets, *S-trap standards* or any other *fixture* that also discharges vertically and depends on siphonic action for its proper functioning shall not have a cumulative change in direction of more than 225°.

(3) A *vent pipe* that protects a water closet or any other *fixture* that also depends on siphonic action for its proper functioning shall be located so that the distance between the connections of the *fixture drain* to the *fixture* and the *vent pipe* shall not exceed,
(a) 1 000 mm in the vertical plane, and
(b) 3 m in the horizontal plane.

(4) The maximum length and minimum slope of every *trap arm* shall conform to Table 7.5.6.3.

(5) The *vent pipe* from a water closet or any other *fixture* that has an integral siphonic flushing action may be connected to the *vertical leg* of its drainage pipe.

r$_4$

Table 7.5.6.3.
Length of Trap Arm

Forming Part of Sentence 7.5.6.3.(4)

Size of *Trap* Served, in.	Maximum *Trap Arm*, m	Minimum Slope
1¼	1.5	1/50
1½	1.5	1/50
2	1.5	1/50
3	1.8	1/50
4	3	1/50
5	4	1/50
6	5	1/50
Column 1	2	3

7.5.6.4. Connection of Vents above Fixtures Served

(1) Except for a *wet vent*, every *vent pipe* shall extend above the *flood level rim* of every *fixture* that it serves before being connected to another *vent pipe*.

(2) No *vent pipe* shall be connected in such a manner that a blockage in a *soil* or *waste pipe* would cause waste to drain through the *vent pipe* to the *drainage system*.

7.5.6.5. Terminals

(1) Except as provided in Sentence (3), the upper end of every *vent pipe* that is not terminated in *open air* shall be connected to a *venting system* that terminates through a roof to *open air*.

(2) The upper end of every *vent pipe* that is terminated in *open air*, other than a *vent pipe* that serves an oil *interceptor* or a *fresh air inlet*, shall be extended above the roof.

(3) Where a *vent pipe* is installed as a result of additions or alterations to a *plumbing system* in an existing *building*, the *vent pipe* may be erected outside the *building*, provided that,
(a) no single change of direction of the *vent pipe* exceeds 45°,
(b) all parts of the *vent pipe* are *nominally vertical*,
(c) the *vent pipe* is increased to not less than 3 in. in *size* before penetrating a wall or roof, and
(d) where the *building* is 4 *storeys* or less in height, the *vent pipe* terminates above the roof of the *building*.

(4) Except for a *fresh air inlet*, where a *vent pipe* is terminated in *open air*, the terminal shall be located,
(a) not less than 1 000 mm above or not less than 3.5 m in any other direction from every air inlet, openable window or door,
(b) not less than 2 000 mm above or not less than 3.5 m in any other direction from a roof that supports an *occupancy*, and
(c) not less than 2 000 mm above ground.
(See Appendix A.)

(5) Where a *vent pipe* passes through a roof, it shall,
(a) be terminated high enough to prevent the entry of roof drainage but not less than 150 mm above the roof or above the surface of storm water, which could pond on the roof, and

(b) be equipped with flashing to prevent the entry of water between the *vent pipe* and the roof or the wall.

(6) Where a *vent pipe* passes through a roof or an outside wall of a *building*, it shall be protected from frost closure by increasing its diameter at least one *size*, but not less than 3 in. in *size*, immediately before it penetrates the roof or the wall.

(7) Where a *vent pipe* is located 2 000 mm or more above a roof, it shall be so constructed as to be stable and secure.

(8) Flashing shall be of material specified in Article 7.2.10.14. and on a shingled roof shall have a minimum dimension of 500 mm by 500 mm.

(9) Where a sleeve flashing is installed on a flat roof it shall extend at least 150 mm above the flood level and on a sloped roof shall be at least 150 mm high on the short side.

(10) No bore of a *vent stack* or *stack vent* shall be reduced or obstructed by the installation of a flashing.

7.5.7. Minimum Size of Vent Pipes

7.5.7.1. General

(1) The *size* of every *vent pipe* shall conform to Table 7.5.7.1.

7.5.7.2. Size Restriction

(1) The *size* of a *branch vent*, *stack vent*, *vent stack* or *header* shall be not less than the *size* of the *vent pipe* to which it is connected.

(2) Every *sanitary building drain* shall terminate at its upstream end in a stack of at least 3 in. *size*.

(3) A stack referred to in Sentence (2) shall be a *soil stack* if one is available and may be a *vent stack* or *waste stack* that provides at least 3 in. *stack vent* and that goes to *open air* above the roof, either directly or through a *header*.

Table 7.5.7.1.
Minimum Permitted Size of Vent Pipe Based on Size of Trap
Forming Part of Sentence 7.5.7.1.(1)

Size of *Trap* Served, in.	Minimum *Size* of *Vent Pipe*, in.	Maximum *Trap Arm*, m
1¼	1¼	1.5
1½	1¼	1.5
2	1½	1.5
3	1½	1.8
4	1½	3
5	2	4
6	2	5
Column 1	2	3

7.5.7.3. Additional Circuit Vents and Relief Vents

(1) Except as provided in Article 7.5.7.1. and in Sentence 7.5.3.1.(7), the minimum *size* of an *additional circuit vent* or *relief vent* installed in conjunction with a *circuit vent* is permitted to be one *size* smaller than the required *size* of the *circuit vent*, but need not be larger than 2 in.

(2) The *size* of the *soil* or *waste pipe* acting as a *relief vent* in accordance with Sentence 7.5.3.1.(4) shall be in conformance with Tables 7.5.8.3. or 7.5.8.4. or Article 7.5.7.1., whichever *size* is the largest considering the hydraulic load drained into the *soil* or *waste pipe*.

7.5.7.4. Offset Relief Vents

(1) Except as provided in Article 7.5.7.1., the minimum *size* of an *offset relief vent* is permitted to be one *size* smaller than the *size* of the *stack vent*.

7.5.7.5. Yoke Vents

(1) *Yoke vents* required by Sentence 7.5.4.3.(1) are permitted to be one *size* smaller than the *size* of the smallest pipe to which they are connected.

7.5.7.6. Vent Pipes for Manholes

(1) The minimum *size* of a *vent pipe* that serves a manhole within a *building* shall be 2 in.

7.5.7.7. Vents for Sanitary Sewage Sumps or Tanks, Dilution Tanks and Macerating Toilet Systems

(1) Except as provided in Sentences (2) and (3), the minimum *size* of the *vent pipe* for a *sanitary sewage* sump or tank, or dilution tank shall be one *size* smaller than the *size* of the largest *branch* or *fixture drain* draining to the sump or tank.

(2) The *size* of every *vent pipe* for a *sanitary sewage* sump or tank, or dilution tank shall be not less than 2 in., but need not be greater than 4 in.

(3) The *size* of every *vent pipe* for a macerating toilet system with a sump or tank shall be not less than 1½ in.

7.5.8. Sizing of Vent Pipes

7.5.8.1. Hydraulic Loads Draining to Wet Vents

(1) The hydraulic load that drains to a *wet vent* shall conform to Table 7.5.8.1.

(2) When determining the *size* of a *wet vent*, the hydraulic load from the most downstream *fixture* or symmetrically connected *fixtures* shall not be included.

7.5.8.2. Individual Vents and Dual Vents

(1) The *size* of *individual vents* and *dual vents* shall be determined using Table 7.5.7.1. according to the largest *trap* served.

(2) When sizing an *individual vent* or a *dual vent*, the length is not taken into consideration.

Table 7.5.8.1.
Maximum Permitted Hydraulic Loads Drained to a Wet Vent
Forming Part of Articles 7.5.2.1. and 7.5.8.1.

Size of *Wet Vent*, in.	Maximum Hydraulic Load, *Fixture Units*	
	Not Serving Water Closets	Serving Not More Than Two Water Closets
		Fixtures Other Than Water Closets
1½	2	N/A
2	4	3
3	12	8
4	36	14
5	N/A	18
6	N/A	23
Column 1	2	3

7.5.8.3. Branch Vents, Headers, Continuous Vents and Circuit Vents

(1) *Branch vents*, *headers*, *circuit vents* and *continuous vents* shall be sized in accordance with Table 7.5.8.3.

(2) For the purposes of Table 7.5.8.3., the length of a *branch vent* shall be its *developed length* from the most distant *soil* or *waste pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*.

(3) For the purposes of Table 7.5.8.3., the length of a *header* shall be its *developed length* from the most distant *soil* or *waste pipe* connection to *open air*.

(4) For the purposes of Table 7.5.8.3., the length of a *circuit vent* shall be its *developed length* from the horizontal *soil* or *waste pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*.

(5) For the purposes of Table 7.5.8.3., the length of a *continuous vent* shall be its *developed length* from the vertical *soil* or *waste pipe* connection to a *vent stack*, *stack vent*, *header* or *open air*.

Table 7.5.8.3.
Sizing of Branch Vents, Headers, Continuous Vents and Circuit Vents
Forming Part of Article 7.5.8.3.

Total Hydraulic Load Served by Vent, *fixture units*	*Size of Vent Pipe, in.*							
	1¼	1½	2	3	4	5	6	8
	Maximum Length of *Vent Pipe*, m							
2	9							
8	9	30	61	Not Limited				
20	7.5	15	46					
24	4.5	9	30					
42	Not Permitted	9	30					
60		4.5	15	120				
100			11	79	305			
200			9	76	275			
500			6	55	215			
1 100				15	61	215		
1 900				6	21	61	215	
2 200					9	27	105	335
3 600					7.5	18	76	245
5 600						7.5	18	76
Column 1	2	3	4	5	6	7	8	9

7.5.8.4. Vent Stacks or Stack Vents

(1) A *vent stack*, or *stack vent* shall be sized in accordance with Table 7.5.8.4. based on,

(a) the length of the *vent stack* or *stack vent*, and

(b) the total hydraulic load that is drained to the lowest section of *soil* or *waste stack* or stacks served by the *vent pipe*, plus any additional vent loads connected to the *vent stack* or *stack vent*.

(2) For the purposes of Table 7.5.8.4., the length of a *stack vent* or *vent stack* shall be its *developed length* from its lower end to *open air*.

(3) The minimum *size* of *vent stack* or *stack vent* shall be one-half the *size* of the *soil* or *waste stack* at its base.

(4) A *stack vent* serving a *wet vent* stack that is over 4 *storeys* high shall extend the full *size* of the *wet vent* to *open air*.

(5) Every *sanitary building drain* shall be provided with at least one *vent* that is not less than 3 in. in *size*.

7.5.8.5. Lengths for other Vent Pipes

(1) When sizing an *additional circuit vent*, *offset relief vent*, *relief vent*, *yoke vent* and the *vent pipe* for an *interceptor*, dilution tank, *sanitary sewage* tank or sump, or manhole, length is not taken into consideration.

7.5.9. Air Admittance Valves

7.5.9.1. Air Admittance Valve as a Vent Terminal

(1) *Individual vents* may terminate with a connection to an *air admittance valve* as provided in Articles 7.5.9.2. and 7.5.9.3.

7.5.9.2. Air Admittance Valves

(1) *Air admittance valves* shall only be used to vent,
(a) *fixtures* in *buildings* undergoing renovation, and
(b) installations where connection to a *vent* may not be practical.

(2) The *air admittance valves* shall be located,
(a) above the *flood level rim* of the *fixture* it serves,
(b) within the maximum *developed length* permitted for the *vent*,
(c) not less than 150 mm above insulation materials, and
(d) installed in a location not subject to back pressure.

(3) *Air admittance valves* shall,
(a) only vent *fixtures* located on the same *storey*, and
(b) be connected to the *horizontal fixture drain*.

7.5.9.3. Installation Conditions

(1) *Air admittance valves* shall not be installed in supply or return air *plenums*, or in locations where they may be exposed to freezing temperatures.

(2) *Air admittance valves* shall be installed in accordance with the manufacturer's installation instructions.

(3) *Air admittance valves* shall be rated for the *size* of *vent pipe* to which they are connected.

(4) Installed *air admittance valves* shall be,
(a) *accessible*, and
(b) located in a space that allows air to enter the valve.

(5) Every *drainage system* shall have one *vent* that terminates to *open air* in conformance with Sentence 7.5.6.2.(1).

Section 7.6. Potable Water Systems

7.6.1. Arrangement of Piping

7.6.1.1. Design, Fabrication and Installation

(1) *Potable water systems* shall be designed, fabricated and installed in accordance with good engineering practice, such as that described in the ASHRAE Guide and Data Books, the ASHRAE Handbooks and ASPE Data Books. (See Appendix A.)

(2) Every *fixture* supplied with separate hot and cold water controls shall have the hot water control on the left and the cold on the right.

(3) Where hot and cold water are mixed and the temperature is regulated by a single, unmarked, manual control, a movement to the left shall increase the temperature and a movement to the right shall decrease the temperature.

(4) In a hot *water distribution system* of a *developed length* of more than 30 m or supplying more than 4 *storeys*, the water temperature shall be maintained by,
(a) recirculation, or
(b) a self-regulating heat tracing system.

r_4

Table 7.5.8.4.
Size and Developed Length of Stack Vents and Vent Stacks

Forming Part of Sentence 7.5.8.4.(1)

Size of Soil or Waste Stack, in.	Total Hydraulic Load Being Vented, *fixture units*	Water Occupied Area	*Size of Stack Vent or Vent Stack*, in.									
			1¼	1½	2	3	4	5	6	8	10	12
			Maximum Length of *Stack Vent or Vent Stack*, m									
1¼	2	0.29	9	Not Limited								
1½	8	0.25	15	46								
	10	.29	9	30.5								
2	12	0.25	9	23	61							
	20	.29	8	15	46							
3	10	0.15	Not Permitted	13	46	317						
	21	.20		10	33.5	247						
	53	.25		8	28.5	207						
	102	.29		7.5	26	189						
4	43	0.15			10.5	76	299					
	140	.20			8	61	229					
	320	.25			7	52	195					
	540	.29			6.5	46	177					
5	190	0.15				25	97.5	302				
	490	.20				29	76	232				
	940	.25				16	64	204				
	1 400	.29				15	58	180				
Column 1	2	3	4	5	6	7	8	9	10	11	12	13

r_4

Table 7.5.8.4. (Cont'd)
Size and Developed Length of Stack Vents and Vent Stacks
Forming Part of Sentence 7.5.8.4.(1)

Size of Soil or Waste Stack, in.	Total Hydraulic Load Being Vented, *fixture units*	Water Occupied Area	*Size of Stack Vent or Vent Stack*, in.									
			1¼	1½	2	3	4	5	6	8	10	12
			Maximum Length of *Stack Vent* or *Vent Stack*, m									
6	500	0.15	Not Permitted			10	39.5	122	305	Not Limited		
	1 100	.20				8	30.5	94.5	238			
	2 000	.25				6.5	25.5	79	201			
	2 900	.29				6	23.5	73	183			
8	1 800	0.15					9.5	29	73	287		
	3 400	.20					7	22	58	219.5		
	5 600	.25					6	19	49	186		
	7 600	.29					5.5	17	43	70.5		
10	4 000	0.15						9.5	24	94.5	292.5	
	7 200	.20						7	18	73	225.5	
	11 000	.25						6	15.5	61	192	
	15 000	.29						5.5	14	55	174	
12	7 300	0.15							9.5	36.5	116	287
	13 000	.20							7	29.5	91	219.5
	20 000	.25							6	24	78	186
	26 000	.29							5.5	22	70	152
15	15 000	0.15								12	39.5	94.5
	25 000	.20								9.5	29	73
	38 000	.25								8	24.5	62
	50 000	.29								7	22.5	56
Column 1	2	3	4	5	6	7	8	9	10	11	12	13

7.6.1.2. Drainage

(1) A *water distribution system* shall be installed so that the system can be drained or blown out with air and outlets for this purpose shall be provided.

7.6.1.3. Control and Shut-off Valves

(1) A *building control valve* shall be provided,

(a) on every *water service pipe* at the location where the *water service pipe* enters the *building*, or

(b) on the *water distribution system* at a location immediately downstream of the *point of entry treatment unit*, where the *building* is served by a *point of entry treatment unit* located in the *building*.

(2) Except as provided in Sentence (3), a drain port shall be provided on the *water distribution system* immediately downstream of the *building control valve* required by Sentence (1) and if there is a meter, the drain port shall be installed immediately downstream of the meter on the *water distribution system*.

(3) Where the *building control valve* required by Sentence (1) is of one in. trade *size* or smaller, the drain port may be an integral part of the *building control valve* in the form of a stop and waste valve and the drain port shall be located on the *water distribution system* side of the stop and waste valve.

(4) Every pipe that is supplied with water from a tank on the property that is a gravity water tank or a tank of a *drinking-water system* shall be provided with a shut-off valve located close to the tank.

(5) Where the water supply is to be metered, the installation of the meter, including the piping that is part of the meter installation and the valving arrangement for the meter installation, shall be according to the *water purveyor's* requirements.

e_1 **(6)** For the purpose of identifying the pipe material where plastic (polybutylene, polyethylene or PVC) water pipe is used underground for a service pipe, the end of the pipe inside the *building* shall be brought above ground for a distance not less than 300 mm and not greater than 450 mm. (See Appendix A.)

7.6.1.4. Shut-off Valves

(1) Except for a single-family dwelling, every *riser* shall be provided with a shut-off valve at the source of supply.

7.6.1.5. Water Closets

(1) Every water closet shall be provided with a shut-off valve on its water supply pipe.

7.6.1.6. Suites

(1) Shut-off valves shall be installed in every *suite* in a *building* of *residential occupancy* as may be necessary to ensure that when the supply to one *suite* is shut off the supply to the remainder of the *building* is not interrupted. (See Appendix A.)

7.6.1.7. Public Washrooms

(1) The water supply to each *fixture* in a washroom for *public use* shall be individually valved and each valve shall be *accessible*.

7.6.1.8. Tanks

(1) Every water pipe that supplies a hot water tank, pressure vessel, *plumbing appliance* or water using device shall be provided with a shut-off valve located close to the tank, pressure vessel, *plumbing appliance* or water using device.

7.6.1.9. Protection for Exterior Water Supply

(1) Every pipe that passes through an exterior wall to supply water to the exterior of the *building* shall be provided with,

(a) a frost-proof hydrant with a separate shut-off valve located inside the *building*, or

(b) a stop-and-waste cock located inside the *building* and close to the wall.

7.6.1.10. Check Valves

(1) A *check valve* shall be installed at the *building* end of the *water service pipe* where the pipe is made of plastic that is suitable for cold water use only. (See Appendix A.)

7.6.1.11. Flushing Devices

(1) Every flushing device that serves a water closet or one or more urinals shall have sufficient capacity and be adjusted to deliver at each operation a volume of water that will thoroughly flush the *fixture* or *fixtures* that it serves.

(2) Where a manually operated flushing device is installed it shall serve only one *fixture*.

7.6.1.12. Relief Valves

(1) Every pressure vessel that is part of a *plumbing system* or connected to a *plumbing system* shall be equipped with a pressure relief valve designed to open when the water pressure in the tank reaches the rated working pressure of the tank, and so located that the pressure in the tank shall not exceed 1100 kPa or ½ the maximum test pressure sustained by the tank whichever is the lesser.

(2) Every hot water tank of a *storage-type service water heater* shall be equipped with a temperature relief valve with a temperature sensing element,
(a) located within the top 150 mm of the tank, and
(b) designed to open and discharge sufficient water from the tank to keep the temperature of the water in the tank from exceeding 99°C under all operating conditions.

(3) A pressure relief valve and temperature relief valve may be combined where Sentences (1) and (2) are complied with.

(4) Every *indirect service water heater* shall be equipped with,
(a) a pressure relief valve, and
(b) a temperature relief valve on every storage tank that forms part of the system.

(5) Every pipe that conveys water from a temperature relief, pressure relief, or a combined temperature and pressure relief valve shall,
(a) be of a *size* at least equal to the *size* of the outlet of the valve,
(b) be rigid, slope downward from the valve, and,
    (i) terminate with an indirect connection above a floor drain, sump or other safe location, with an *air break* of not more than 300 mm, or
    (ii) terminate at a distance not less than 150 mm and not more than 300 mm from a floor and discharges vertically down,
(c) have no thread at its outlet, and
(d) be capable of operating at a temperature of not less than 99°C.

(6) The temperature relief valve required in Clause (4)(b) shall,
(a) have a temperature sensing element located within the top 150 mm of the tank, and
(b) be designed to open and discharge sufficient water to keep the temperature of the water in the tank from exceeding 99°C under all operating conditions.
(See Appendix A.)

(7) No shut-off valve shall be installed on the pipe between any tank and the relief valves or on the discharge lines from such relief valves.

7.6.1.13. Solar Domestic Hot Water Systems

(1) Except as provided in Sentence (2), a system for solar heating of *potable* water shall be installed in accordance with good engineering practice.

m_5 **(2)** Packaged systems for solar heating of *potable* water in *residential occupancies* shall be installed in conformance with CSA F383, "Installation of Packaged Solar Domestic Hot Water Systems".

7.6.1.14. Water Hammer

(1) Provision shall be made to protect the *water distribution system* from the adverse effects of water hammer. (See Appendix A.)

7.6.1.15. Mobile Home Water Service

(1) A *water service pipe* intended to serve a mobile home shall,
(a) be not less than ¾ in. *size*,
(b) be terminated above ground, and

(c) be provided with,
  (i) a tamperproof terminal connection that is capable of being repeatedly connected, disconnected and sealed,
  (ii) a protective concrete pad,
  (iii) a means to protect it from frost heave, and
  (iv) a curb stop and a means of draining that part of the pipe located above the frost line when not in use.

7.6.1.16. Thermal Expansion

(1) Protection against thermal expansion shall be required when a *check valve* is required by Article 7.6.1.10., a *backflow preventer* is required by Article 7.6.2.2., or a pressure reducing valve is required by Article 7.6.3.3. (See Appendix A.)

7.6.2. Protection from Contamination

7.6.2.1. Connection of Systems

(1) Connections to *potable water systems* shall be designed and installed so that non-*potable* water or substances that may render the water non-*potable* cannot enter the system.

(2) No connection shall be made between a *potable water system* supplied with water from a *drinking-water system* and any other *potable water system* without the consent of the *water purveyor*.

7.6.2.2. Back Siphonage (See Appendix A.)

(1) Every *potable water system* that supplies a *fixture* or tank that is not subject to pressures above atmospheric shall be protected against *back-siphonage* by a *backflow preventer*.

(2) Where a *potable* water supply is connected to a boiler, tank, cooling jacket, lawn sprinkler system or other device where a non-*potable* fluid may be under pressure that is above atmospheric or the water outlet may be submerged in the non-*potable* fluid, the water supply shall be protected against *backflow* by a *backflow preventer*.

(3) Where a hose bibb is installed outside a *building*, inside a garage, or where there is an identifiable risk of contamination, the *potable water system* shall be protected against *backflow* by a *backflow preventer*.

7.6.2.3. Reserved

7.6.2.4. Backflow from Fire Protection Systems

(1) A *backflow preventer* shall not be required in a *residential full flow through fire sprinkler system*, in which the pipe and fittings are constructed of *potable water system* materials.

(2) Except as required in Sentence (4), *potable water system* connections to fire sprinkler and standpipe systems shall be protected against *backflow* caused by *back-siphonage* or *back pressure* in conformance with the following Clauses:
(a) *Residential partial flow through fire sprinkler systems* in which the pipes and fittings are constructed of *potable water system* materials shall be protected by a dual *check valve backflow preventer* conforming to CAN/CSA-B64.6.1, "Backflow Preventers, Dual Check Valve Type for Fire Systems (DuCF)",
(b) *Class 1 fire sprinkler/standpipe systems* shall be protected by a single *check valve backflow preventer* conforming to CAN/CSA-B64.9, "Backflow Preventers, Single Check Valve Type for Fire Systems (SCVAF)", provided that the systems do not use antifreeze or other additives of any kind and all pipes and fittings are constructed of *potable water system* materials,
(c) *Class 1 fire sprinkler/standpipe systems* not covered by Clause (b) as well as *Class 2* and *Class 3 fire sprinkler/standpipe systems* shall be protected by a double *check valve backflow preventer* conforming to CAN/CSA-B64.5.1, "Backflow Preventers, Double Check Valve Type for Fire Systems (DCVAF)", provided that the systems do not use antifreeze or other additives of any kind,
(d) *Class 1, Class 2* or *Class 3 fire sprinkler/standpipe systems*, in which antifreeze or other additives are used shall be protected by a reduced pressure principle *backflow preventer* conforming to CAN/CSA-B64.4.1, "Backflow Preventers, Reduced Pressure Principle Type for Fire Systems (RPF)", installed on the portion of the system that uses the additives and the balance of the system shall be protected as required by Clauses (b) or (c),
(e) *Class 4* and *5 fire sprinkler/standpipe systems* shall be protected by a reduced pressure principle *backflow preventer* conforming to CAN/CSA-B64.4.1, "Backflow Preventers, Reduced Pressure Principle Type for Fire Systems (RPF)",

(f) *Class 6 fire sprinkler/standpipe systems* shall be protected,
  (i) by a double *check valve backflow preventer* conforming to CAN/CSA-B64.5.1, "Backflow Preventers, Double Check Valve Type for Fire Systems (DCVAF)", or
  (ii) where a potentially severe health hazard may be caused by *backflow*, by a reduced pressure principle *backflow preventer* conforming to CAN/CSA-B64.4.1, "Backflow Preventers, Reduced Pressure Principle Type for Fire Systems (RPF)", and

(g) backflow prevention devices on fire sprinkler and standpipe systems shall be selected and installed in conformance with Table 7.6.2.4.

Table 7.6.2.4.
Backflow Prevention Devices on Fire Sprinkler and Standpipe Systems
Forming Part of Sentences 7.6.2.4.(2)

CSA Standard Number	Type of Device(1)	System Made with Potable Water System Materials		System Not Made with Potable Water System Materials	
		Minor Hazard(2) Residential Partial Flow-Through System	Minor Hazard(2) Class 1 System	Moderate Hazard(2) Class 1, 2, 3 and 6 Systems	Severe Hazard(2) – Any Class of System in which Antifreeze or Other Additives Are Used
B64.6.1	DuCF	P	NP	NP	NP
B64.9	SCVAF	P	P	NP	NP
B64.5.1	DCVAF	P	P	P	NP
B64.4.1	RPF	P	P	P	P
Column 1	2	3	4	5	6

e_1 **Notes to Table 7.6.2.4.:**

P - Permitted

NP - Not Permitted

(1) The product is only permitted for use on fire sprinkler and standpipe systems.

(2) Minor Hazard, Moderate Hazard and Severe Hazard have the same meaning as indicated in CAN/CSA-B64.10, "Manual for the Selection and Installation of Backflow Prevention Devices".

(3) The *backflow preventer* required by Sentence (2) shall be installed upstream of the fire department pumper connection.

(4) Where a reduced pressure principle *backflow preventer* is required on the *water service pipe* at a service connection located on the same premises as the *fire service main* in *Class 3, 4, 5* and *6 fire sprinkler/standpipe systems*, a reduced pressure principle *backflow preventer* conforming to CAN/CSA-B64.4.1, "Backflow Preventers, Reduced Pressure Principle Type for Fire Systems (RPF)", shall also be provided on the fire service connection.

r₄ **(5)** Except as provided in Sentences (1) and (8) and Article 7.6.2.5., *backflow preventers* shall be selected, installed and tested in conformance with CAN/CSA-B64.10, "Manual for the Selection and Installation of Backflow Prevention Devices".

(6) *Backflow* prevention devices shall be provided in conformance with Sentence 7.2.10.10.(1).

(7) Tank type water closet valves shall be provided with a *back-siphonage preventer* in conformance with Sentence 7.2.10.10.(2).

(8) *Buildings* of *residential occupancy* within the scope of Part 9 are not required to be isolated unless they have access to an *auxiliary water supply*.

(9) In addition to the *backflow preventer* required by this Subsection, for *buildings* or facilities where a potentially severe health hazard may be caused by *backflow*, the *potable water system* shall be provided with premise isolation by the installation of a reduced pressure principle *backflow preventer*. (See Appendix A.)

r₄ 7.6.2.5. Backflow from Buildings with a Solar Domestic Hot Water System (See Appendix A.)

(1) Except as permitted by Sentence (2) and as provided in Sentences (3) and (4), a *potable water system* shall be protected against *backflow* where the heat transfer loop of a solar domestic hot water system is *directly connected* to the *potable water system*.

(2) Where the heat transfer loop of the solar domestic hot water system consists of direct flow-through of *potable* water only, protection against *backflow* is not required.

(3) A *potable water system* that is *directly connected* to a solar domestic hot water system that serves a *residential occupancy* within the scope of Part 9, shall be provided with a *backflow* prevention device selected in accordance with CSA F379.1, "Packaged Solar Domestic Hot Water Systems (Liquid-to-Liquid Heat Transfer) for All-Season Use".

(4) Where a solar domestic hot water system includes a single wall heat exchanger and contains only a relatively harmless heat transfer fluid as described in CSA F379.1, "Packaged Solar Domestic Hot Water Systems (Liquid-to-Liquid Heat Transfer) for All-Season Use", the *backflow* prevention required in Sentence (1) is permitted to be a dual check valve *backflow preventer* conforming to CAN/CSA-B64.3, "Backflow Preventers, Dual Check Valve with Atmospheric Port Type (DCAP)".

7.6.2.6. Reserved

7.6.2.7. Reserved

7.6.2.8. Cleaning of Systems

(1) A newly installed part of a *potable water system* shall be cleaned and then flushed with *potable* water before the system is put into operation.

7.6.2.9. Air Gap

(1) An *air gap* shall not be located in a noxious environment.

(2) Every *air gap* shall be not less than 25 mm high and at least twice the diameter of the opening of the water supply outlet in height. (See Appendix A.)

7.6.2.10. Vacuum Breakers and Flood Levels

(1) Where the *critical level* is not marked on an atmospheric *vacuum breaker* or pressure *vacuum breaker*, the *critical level* shall be taken as the lowest point on the device.

(2) Where an atmospheric *vacuum breaker* is installed, it shall be located on the downstream side of the *fixture* control valve or faucet so that it will be subject to water supply pressure,
(a) only when the *fixture* control valve or faucet is open, and
(b) for periods of use not to exceed 12 h continuous.

(3) An atmospheric *vacuum breaker* shall be installed so that the *critical level* is at least the distance specified by the manufacturer at which the device will operate safely but not less than 25 mm above,
(a) the *flood level rim* of a *fixture* or tank, or
(b) the highest point open to atmosphere in an irrigation system.

(4) A pressure *vacuum breaker* shall be installed with its *critical level* at least 300 mm above,
(a) the *flood level rim* of a *fixture* or tank, or
(b) the highest point open to atmosphere in an irrigation system.

7.6.3. Size and Capacity of Pipes

7.6.3.1. Design

(1) Except as permitted in Sentences (2) and (3), the *size* of every pipe in a *water distribution system* that supplies water to a *fixture* or device and the flow pressures at the supply openings shall be designed to provide peak demand flow in conformance to Table 7.6.3.1.

(2) A tail piece or connector not more than 750 mm long and not less than ¼ in. inside diameter may be used to supply water to a *fixture* or device.

(3) A *water distribution system* that serves not more than a single *dwelling unit* does not need to conform to Column 3 of Table 7.6.3.1.

(4) No *water system* between the point of connection with the *water service pipe* or the water meter and the first branch that supplies a water heater, shall be less than ¾ in. *size*.

(5) Every pipe that supplies a *fixture* shall have a capacity that will produce a flow in the *fixture* that will flush the *fixture* and keep it in a sanitary condition.

Table 7.6.3.1.
Pipe Sizing for Water Supply to Fixture/Device
Forming Part of Sentences 7.6.3.1.(1) and (3)

Fixture or Device	Minimum *Size* of Supply Pipe, in.	Minimum Flow Pressure[1], kPa (gauge)	Hydraulic Load, *fixture units*	
			Private Use	*Public Use*
r_4 *Bathroom group*				
(a) with flush tank	NA	NA	6	-
(b) with direct flush valve	NA	NA	8	-
Bath tub (with or without shower)	½	50	2	4
Clothes washer	½	100	3	-
Cup Sink	½	50	-	4
Dishwasher, domestic	½	100	3	-
Drinking fountain	⅜	100	-	1
Hose bib or wall hydrant	½	100	[2]	[2]
Laundry tray: 1, 2 or 3 compartments	½	100	2	4
Lavatory	⅜	50	1	2
Shower, single head	½	50	2	4
Sink				
(a) kitchen, domestic	½	50	2	-
(b) kitchen, commercial	½	50	-	4
(c) service, slop	½	50	-	3
(d) service with direct flush valve	¾	100	-	5
Urinal				
(a) with flush tank	½	50	-	3
(b) with direct flush valve	¾	100	-	5
(c) with self closing metering valve	½	-	-	-
Water closet				
(a) with flush tank	⅜	50	3	5
(b) with direct flush valve	1	100	6	10
Column 1	2	3	4	5

Notes to Table 7.6.3.1.:

(1) Measured immediately upstream of faucet or supply valve.

(2) A continuous load of 0.38 L/s.

7.6.3.2. Hydraulic Load

(1) Except as provided in Sentence (3), the hydraulic load of a *fixture* or device that is listed in Table 7.6.3.1. shall be the number of *fixture units* given in the Table.

(2) Except as provided in Sentences (1) and (3), the hydraulic load of a *fixture* that is not listed in Table 7.6.3.1. is the number of *fixture units* listed in Table 7.6.3.2.

(3) Where *fixtures* are supplied with both hot and cold water, the hydraulic loads for maximum separate demands shall be 75% of the hydraulic load of the *fixture units* given in Tables 7.6.3.1. and 7.6.3.2. when using a detailed engineering design method.

Table 7.6.3.2.
Hydraulic Loads of Fixtures Not Listed in Table 7.6.3.1.
Forming Part of Sentences 7.6.3.2.(2) and (3)

Size of Supply Pipe, in.	Hydraulic Load, *fixture units*	
	Private Use	*Public Use*
⅜	1	2
½	2	4
¾	3	6
1	6	10
Column 1	2	3

7.6.3.3. Static Pressure

(1) Where the static pressure at any *fixture* may exceed 550 kPa, a pressure reducing valve conforming to Article 7.2.10.12. shall be installed to limit the maximum static pressure at the *fixture* to 550 kPa.

7.6.3.4. Size

(1) Every *water service pipe* shall be sized according to the peak demand flow but shall not be less than ¾ in. *size*.

7.6.4. Water Efficiency

7.6.4.1. Water Supply Fittings

(1) The flow rates of fittings that supply water to a *fixture* shall not exceed the maximum flow rates at the test pressures listed for that fitting in Table 7.6.4.1.

(2) Sentence (1) does not apply to a *fixture* located in a *heritage building*.

Table 7.6.4.1.
Maximum Flow Rates for Water Supply Fittings
Forming Part of Sentence 7.6.4.1.(1)

Fitting	Maximum Flow, L/min	Test Pressure, kPa
Lavatory Faucet	8.35	413
Kitchen Faucet	8.35	413
Shower Heads	9.5	550
Column 1	2	3

7.6.4.2. Plumbing Fixtures

(1) Water closets and urinals shall be certified to CAN/CSA-B45.0, "General Requirements for Plumbing Fixtures".

(2) The flush cycle for each *fixture* that is a water closet or urinal and that is installed as a replacement for a *fixture* in a *building* that existed before the 1st day of January 1996 shall not exceed the maximum flush cycle listed for that *fixture* in Table 7.6.4.2.A.

(3) Except as provided in Sentence (2) the flush cycle for each *fixture* that is a water closet or urinal shall not exceed the maximum flush cycle listed for that *fixture* in Table 7.6.4.2.B.

(4) Sentences (2) and (3) do not apply to a *fixture* located in a *heritage building*, *care or detention occupancy* or passenger station.

Table 7.6.4.2.A.
Maximum Flush Cycles for Sanitary Fixtures
Forming Part of Sentences 7.6.4.2.(2)

Fixture	litres
Water Closet (Tank Type)	13.25
Water Closet (Direct Flush)	13.25
Urinal (Tank Type)	5.68[(1)]
Urinal (Direct Flush)	5.68[(1)]
Column 1	2

Notes to Table 7.6.4.2.A.:

(1) Urinals equipped with automatic flushing devices shall be controlled to prevent unnecessary flush cycles during *building* down time.

Table 7.6.4.2.B.
Maximum Flush Cycles for Sanitary Fixtures
Forming Part of Sentence 7.6.4.2.(3)

Fixture	litres
Water Closet (Tank Type)	6
Water Closet (Direct Flush)	6
Urinal (Tank Type)	3.8[(1)]
Urinal (Direct Flush)	3.8[(1)]
Column 1	2

Notes to Table 7.6.4.2.B.:

(1) Urinals equipped with automatic flushing devices shall be controlled to prevent unnecessary flush cycles during *building* down time.

7.6.5. Water Temperature Control

7.6.5.1. Maximum Temperature of Hot Water

(1) Except as provided in Sentences (2) and 7.6.5.3.(1), the maximum temperature of hot water supplied by fittings to *fixtures* in a *residential occupancy* shall not exceed 49°C.

(2) Sentence (1) does not apply to hot water supplied to installed dishwashers or clothes washers.

7.6.5.2. Showers

r₄ **(1)** Except as provided for in Sentence (2) and (3), all valves supplying fixed location shower heads, shall be individually pressure-balanced or thermostatic-mixing valves, conforming to ASME A112.18.1 / CAN/CSA-B125.1, "Plumbing Supply Fittings".

r₄ **(2)** An individually pressure-balanced or thermostatic-mixing valve shall not be required for showers if a single temperature water supply for such showers is controlled by a master thermostatic-mixing valve conforming to CAN/CSA-B125.3, "Plumbing Fittings".

(3) Deck-mounted, hand-held, flexible-hose spray attachments are exempt from the thermal shock requirements of Sentence (1).

(4) Pressure-balanced or thermostatic-mixing valves shall be,
(a) designed so that the outlet temperature does not exceed 49°C, or
(b) equipped with high-limit stops which shall be adjusted to a maximum hot water setting of 49°C.

7.6.5.3. Temperature Control Devices

(1) A *water distribution system* supplying hot water to any bathtub, shower or hand basin that is accessible to a patient or resident in a Group B, Division 2 or 3 occupancy or a resident of a group home, *home for special care* or residence for developmentally-handicapped adults shall have one or more temperature gauges and control devices that are,
(a) accessible only to supervisory staff, and
(b) capable of being adjusted to ensure that the temperature of the water supplied to the *fixtures* does not exceed 49°C.

Section 7.7. Non-Potable Water Systems

7.7.1. Connection

7.7.1.1. Non-Potable Connection

(1) A non-*potable water system* shall not be connected to a *potable water system*.

7.7.2. Identification

7.7.2.1. Markings Required

(1) Non-*potable* water piping shall be identified by markings that are permanent, distinct and easily recognized.

7.7.3. Location

7.7.3.1. Pipes

(1) Non-*potable* water piping shall not be located,
(a) where food is prepared in a food processing plant,
(b) above food-handling equipment,
(c) above a non-pressurized *potable* water tank, or
(d) above a cover of a pressurized *potable* water tank.

7.7.3.2. Outlets

(1) An outlet from a non-*potable water system* shall not be located where it can discharge into,
(a) a sink or lavatory,
(b) a *fixture* into which an outlet from a *potable water system* is discharged, or
(c) a *fixture* that is used for a purpose related to the preparation, handling or dispensing of food, drink or products that are intended for human consumption.

# Part 9
Housing and Small Buildings

Section 9.31. Plumbing Facilities

	9.31.1.	Scope	3
	9.31.2.	General	3
	9.31.3.	Water Supply and Distribution	4
	9.31.4.	Required Facilities	4
	9.31.5.	Reserved	4
	9.31.6.	Service Water Heating Facilities	5

Part 9
Housing and Small Buildings

Section 9.31. Plumbing Facilities

9.31.1. Scope

9.31.1.1. Application

(1) Except as provided in Sentence (2), this Section applies to *plumbing* facilities and *plumbing systems* serving *dwelling units*.

(2) *Plumbing* facilities, grab bars, floor drains and floor and wall finishes around urinals shall conform to Subsection 3.7.4. and Article 7.1.5.2. in,
(a) a *recreational camp*,
(b) a *camp for housing of workers*, or
(c) all other *buildings* not described in Sentence (1).

(3) Medical gas piping systems shall conform to Subsection 3.7.5.

9.31.2. General

9.31.2.1. General

(1) The *construction* of *plumbing systems* shall conform to Part 7.

9.31.2.2. Corrosion Protection

(1) Metal pipes in contact with cinders or other corrosive material shall be protected by a heavy coating of bitumen or other corrosion protection.

9.31.2.3. Grab Bars

(1) When provided, grab bars shall be capable of resisting a load of not less than 1.3 kN (300 lb) applied vertically or horizontally.

9.31.3. Water Supply and Distribution

9.31.3.1. Reserved

9.31.3.2. Required Connections

(1) In a *dwelling unit* with a *water distribution system*, piping for hot and cold water shall be connected to every kitchen sink, lavatory, bathtub, shower, slop sink and laundry area.

(2) Piping for cold water shall be run to every water closet.

9.31.4. Required Facilities

9.31.4.1. Required Fixtures

(1) In a *dwelling unit* with a *water distribution system*, a kitchen sink, lavatory, bathtub or shower stall and water closet shall be provided.

9.31.4.2. Laundry Fixtures

(1) Laundry facilities or a space for laundry facilities shall be provided in every *dwelling unit* or grouped elsewhere in the *building* in a location conveniently accessible to occupants of every *dwelling unit*.

9.31.4.3. Hot Water Supply

(1) In a *dwelling unit* with a *water distribution system*, a hot water supply shall be provided.

(2) A *water distribution system* supplying hot water to *plumbing fixtures* shall conform to the requirements in Subsection 7.6.5.

9.31.4.4. Floor Drains

(1) A floor drain shall be installed in a *basement* forming part of a *dwelling unit*.

9.31.5. Reserved

9.31.6. Service Water Heating Facilities

9.31.6.1. Hot Water Temperature

(1) Where a hot water supply is required by Article 9.31.4.3., equipment shall be installed to provide to every *dwelling unit* an adequate supply of service hot water with a temperature range from 45°C (113°F) to 60°C (140°F).

9.31.6.2. Equipment and Installation

(1) Every *service water heater* and its installation shall conform to Part 7.

(2) Reserved.

(3) Where the *building* is in a location where the spectral response acceleration, $S_a(0.2)$, is greater than 0.55, *service water heaters* shall be secured to the structure to resist overturning and displacement.

9.31.6.3. Corrosion-Resistant Coating

(1) Where storage tanks for *service water heaters* are steel, they shall be coated with zinc, vitreous enamel (glass lined), hydraulic cement or other corrosion-resistant material.

9.31.6.4. Fuel-Burning Heaters

(1) Fuel-burning *service water heaters* shall be connected to a *chimney flue* conforming to Section 9.21.

9.31.6.5. Heating Coils

(1) Heating coils of *service water heaters* shall not be installed in a *flue* or in the combustion chamber of a *boiler* or furnace heating a *building*.

Part 10
Change of Use

Section 10.1. General
10.1.1. Scope 3

Section 10.2. Classification of Existing Buildings
10.2.1. Classification 4

Section 10.3. Requirements
10.3.1. General 4
10.3.2. Performance Level 5

Section 10.4. Compliance Alternatives
10.4.1. Compliance Alternatives 8

Part 10
Change of Use

Section 10.1. General

10.1.1. Scope

10.1.1.1. Scope

(1) The scope of this Part shall be as described in Subsection 1.1.2. of Division A.

10.1.1.2. Change in Major Occupancy

(1) The following changes of use shall also be deemed to be a change in *major occupancy* for the purposes of this Part:

(a) a *suite* of a Group C *major occupancy* is converted into more than one *suite* of a Group C *major occupancy*,

e_3 (b) a *suite* or part of a *suite* of a Group A, Division 2 or Group A, Division 4 *major occupancy* is converted to a *gaming premises*,

(c) a *farm building* or part of a *farm building* is changed to a *major occupancy*,

(d) a *building* or part of a *building* is changed to a *post-disaster building*, or

(e) the use of a *building* or part of a *building* is changed and the previous *major occupancy* of the *building* or part of the *building* cannot be determined.

10.1.1.3. Definitions

(1) In this Part, the following words and terms have the meaning that they are given in Article 11.1.1.2.:

Building system

Section 10.2. Classification of Existing Buildings

10.2.1. Classification

10.2.1.1. Classification of Major Occupancy

(1) Every existing *building* or part of it shall be classified according to its *major occupancy* in accordance with the requirements of Subsection 3.1.2.

10.2.1.2. Classification According to Construction and Occupancy

(1) For the purposes of this Part, existing *buildings* shall be classified as to their *construction* and *occupancy* as provided for in Sentence 11.2.1.1.(1).

10.2.1.3. Building Size and Construction

(1) The requirements of Articles 3.2.2.20. to 3.2.2.83. do not apply to this Part.

Section 10.3. Requirements

10.3.1. General

10.3.1.1. General

r_1 **(1)** Except as provided in Section 10.4., a *building* or part of a *building* subject to a change of *major occupancy* shall conform to the requirements of Subsection 3.2.6., Sections 3.7., 3.11., 3.12., Subsections 9.5.1. and 9.5.3. to 9.5.10, Section 9.7., Subsection 9.10.17., Sections 9.31. and 9.32., and Subsections 9.34.1. to 9.34.3. as they apply to the new *major occupancy* that the *building* or part of a *building* is to support.

10.3.2. Performance Level

10.3.2.1. General

(1) The *performance level* of a *building* after the change of *major occupancy* shall not be less than the *performance level* prior to the change of *major occupancy*.

(2) For the purposes of Sentence (1), reduction of *performance level* shall be determined in accordance with Article 10.3.2.2.

10.3.2.2. Reduction in Performance Level

(1) Except as provided in Sentence (2), the *performance level* of a *building* or part of a *building* is reduced where the existing structural floor and roof framing systems and their supporting members are not adequate to support the proposed *dead loads* and *live loads* of the new *major occupancy* that the *building* is to support.

(2) The inadequacy of the existing structural floor or roof framing system and its supporting members to support the proposed *dead loads* and *live loads* does not reduce the *performance level* of the *building* if the portion of the floor affected by the proposed loads is restricted to the loading it will support and signs stating the restrictions are posted.

(3) Except as provided in Section 10.4., the *performance level* of a *building* or part of a *building* is reduced where the early warning and evacuation systems requirements of the *building* do not meet the early warning and evacuation systems requirements set out in Table 10.3.2.2.A. for the new *major occupancy* that the *building* is to support.

(4) Except as provided in Sentence (5), the *performance level* of an existing *building* is reduced where a change in use will result in a change of the *major occupancy* of all or part of an existing *building* to another *major occupancy* of a greater *hazard index*.

(5) Except as provided in Sentence (6), if the *hazard index* of the new *major occupancy* is greater than the *hazard index* of the existing *major occupancy*, the *performance level* is not reduced where the *hazard index* of the new *major occupancy* is not greater than the *construction index* of the existing *building*.

Table 10.3.2.2.A.
For Evaluation of Early Warning/Evacuation
Forming Part of Sentence 10.3.2.2.(3)

Early Warning / Evacuation Evaluation	*Compliance Alternative*[1]
Early Warning and Evacuation to be checked against (a) *access to exit* widths based on *occupant load* in Subsection 3.3.1. or 9.9.3.; (b) *exit* widths based on *occupant load* in Subsection 3.4.3. or 9.9.3.; (c) *exit* signs in Subsection 3.4.5. or 9.9.10.; (d) lighting of *exits*, lighting of *access to exits* and emergency lighting in Subsection 3.2.7. or 9.9.11.; (e) fire alarm system in Subsection 3.2.4. or 9.10.18.; (f) *smoke alarms* in Subsection 9.10.19.; (g) travel distance and number of *exits* in other Parts of this Division; (h) smoke control measures, and at least one elevator to permit transport of fire fighters to all floors in *hotels* whose floor level is more than 18 m high, measured between *grade* and floor level of the top *storey* as per Subsection 3.2.6.; and (i) door release hardware requirements in Articles 3.3.1.12. and 3.4.6.15., and deficiencies shall be upgraded.	EARLY WARNING (a) *Compliance alternatives* as listed may be used. EVACUATION (b) *Compliance alternatives* as listed to *access to exit* and *exit* widths, number of *exits*, door release hardware, and travel distance may be used.
Column 1	2

Notes to Table 10.3.2.2.A.:

(1) See Tables 11.5.1.1.A., 11.5.1.1.B., 11.5.1.1.C., 11.5.1.1.D/E. and 11.5.1.1.F. for *compliance alternatives* that may be used.

(6) Small or medium sized existing *buildings* as determined in Tables 11.2.1.1.B to 11.2.1.1.N. facing multiple streets may be assigned a *hazard index* credit of 1, which may be subtracted from the *hazard index* of the new *major occupancy* provided,

(a) the *building* does not contain a Group B, Division 1, a Group C, or a Group F, Division 1 *occupancy*, and

r_1 (b) fire fighting access complying with Articles 3.2.5.1., 3.2.5.2., 3.2.5.3., 3.2.5.4. and 3.2.5.5. or Subsection 9.10.20.

(7) Except as provided in Sentence (8), the *performance level* of a *building* or part of a *building* is reduced in an existing *building* constructed of *combustible construction* where,
(a) the *occupancy* is changed to a *residential occupancy* in all or part of the *building*, and
(b) if the *building* was new, it would have been required to be constructed of *noncombustible construction*.

(8) A change in the *occupancy* of a *building* or part of a *building* to a *residential occupancy* does not reduce the *performance level* of the *building* or part of the *building* where,
(a) the *building* is *sprinklered*, and
(b) the *building* does not exceed 6 *storeys* in *building height*.

(9) The *performance level* of a *building* or part of a *building* is reduced where the new *major occupancy* in an existing *building* of multiple *occupancy* is not separated from adjoining *major occupancies* by *fire separations* having *fire-resistance ratings* conforming to Article 3.1.3.1., Subsection 9.10.9. or Table 10.3.2.2.B.

Table 10.3.2.2.B.(1)
Additional Upgrading for Multiple Major Occupancies
Forming Part of Sentence 10.3.2.2.(9)

New *Major Occupancy*	Code Requirements	*Compliance Alternative*	
All (2)	Table 3.1.3.1. and Subsection 9.10.9. Where:	For Existing *Building* Reduce to	If *Sprinklered* Reduce to
	1 h rating required	45 min	30 min
	2 h rating required	1.5 h	1 h
	3 h rating required	2 h	1.5 h
Column 1	2	3	4

Notes to Table 10.3.2.2.B.:
(1) For *buildings* with multiple *major occupancies* only, where there is a change in *major occupancy*.
(2) See Sentence 10.3.2.2.(9).

(10) The *performance level* of a *building* is reduced where the *building* after the change of *major occupancy* will not comply with Articles 3.1.3.2. or 9.10.9.12.

(11) The *performance level* of a *building* or part of a *building* is reduced where, after a change of *major occupancy*,
(a) the total daily design *sanitary sewage flow* of the new *major occupancy*, calculated in accordance with Article 8.2.1.3., exceeds the capacity of any component of a *sewage system* serving the *building*, or
(b) the type or amount of *sanitary sewage* that will, under the new *major occupancy*, be discharged to a *sewage system* serving the *building* is prohibited by Article 8.1.3.1.

Section 10.4. Compliance Alternatives

10.4.1. Compliance Alternatives

10.4.1.1. Substitution

r_4 **(1)** Except as provided in Sentence (3), a *compliance alternative* to a requirement contained in Part 3, 4, 6 or 8 that is shown in Tables 11.5.1.1.A., 11.5.1.1.B., 11.5.1.1.C., 11.5.1.1.D/E. or 11.5.1.1.F. may be substituted for the requirement where the *chief building official* is satisfied that compliance with the requirement is impracticable because,
(a) of structural or *construction* difficulties, or
(b) it is detrimental to the preservation of a *heritage building*.

r_4 **(2)** Except as provided in Sentence (3), a *compliance alternative* to a requirement contained in Part 9 or12 shown in Tables 11.5.1.1.C., 11.5.1.1.D/E. or 11.5.1.1.F. may be substituted for the requirement without satisfying the *chief building official* that the requirement is impracticable.

(3) Where the *building* has been in existence for less than five years, *compliance alternatives* may only be used in respect of requirements of this Division that are referenced in Sentences 10.3.2.2.(3), (5) and Table 10.3.2.2.B.

Part 11
Renovation

Section 11.1. General

11.1.1. Scope 3
11.1.2. Application 3

Section 11.2. Classification of Existing Buildings

11.2.1. Classification 4

Section 11.3. Proposed Construction

11.3.1. New and Existing Building Systems 5
11.3.2. Extension of Buildings 5
11.3.3. Renovation 5
11.3.4. Plumbing 6

Section 11.4. Performance Level Evaluation and Compensating Construction

11.4.1. General 7
11.4.2. Reduction in Performance Level 7
11.4.3. Compensating Construction 10

Section 11.5. Compliance Alternatives

11.5.1. Compliance Alternatives 13

Part 11
Renovation

Section 11.1. General

11.1.1. Scope

11.1.1.1. Scope

(1) The scope of this Part shall be as described in Subsection 1.1.2. of Division A.

11.1.1.2. Definitions

(1) In this Part,

Building system means a combination of elements or components that form a complete major division of *construction* in the design of a *building* or part of a *building*, including a structural or framing system, a waterproofing system, a *drainage system*, an *exterior cladding* system, a roofing system, a window system, a *partition* system, a corridor system, a stair system, a fire alarm and detection system, a sprinkler system or a heating, ventilation or *air-conditioning* system, a *foundation* system, a standpipe and hose system, a flooring system, a *plumbing system*, a *sewage system* or an electrical system.

11.1.2. Application

11.1.2.1. Extension, Material Alteration or Repair

(1) Where an existing *building* is subject to extension, material alteration or repair,
(a) the proposed *construction* shall comply with Section 11.3., and
(b) the *performance level* of the *building* shall be evaluated and compensating *construction* shall be undertaken in accordance with Section 11.4.

Section 11.2. Classification of Existing Buildings

11.2.1. Classification

11.2.1.1. Construction Index and Hazard Index

(1) Where proposed *construction* will result in the change of *major occupancy* of all or part of an existing *building* to another *major occupancy*, the *building* shall be classified as to its,
(a) *construction* on the basis of *construction index* as provided for in this Part including Table 11.2.1.1.A., and
(b) *occupancy* on the basis of *hazard index* as provided for in this Part including Tables 11.2.1.1.B. to 11.2.1.1.N.

(2) Small or medium sized existing *buildings* as determined in Tables 11.2.1.1.B. to 11.2.1.1.N. facing multiple *streets* may be assigned a *hazard index* credit of 1, which may be subtracted from the *hazard index* of the proposed *major occupancy* to reduce the additional upgrading required by Table 11.4.3.4.A. provided,
(a) the *building* does not contain a Group B, Division 1; a Group C, or a Group F, Division 1 *occupancy*, and
r_1 (b) fire fighting access complying with Articles 3.2.5.1., 3.2.5.2., 3.2.5.3., 3.2.5.4. and 3.2.5.5. or Subsection 9.10.20.

(3) The requirements of Articles 3.2.2.20. to 3.2.2.83. do not apply to this Part.

11.2.1.2. Multiple Occupancies

(1) The classification of an existing *building* of multiple *occupancy* under Article 11.2.1.1. shall be applied according to Articles 3.2.2.5. to 3.2.2.8.

11.2.1.3. Prohibition of Occupancy Combinations

(1) Nothing in this Part relieves an applicant from complying with the requirements of Articles 3.1.3.2. or 9.10.9.12.

Section 11.3. Proposed Construction

11.3.1. New and Existing Building Systems

11.3.1.1. Material Alteration or Repair of a Building System

(1) Where an existing *building system* is materially altered or repaired, the *performance level* of the *building* after the material alteration or repair shall be at least equal to the *performance level* of the *building* prior to the material alteration or repair.

11.3.1.2. New Building Systems and Extension of Existing Building Systems

(1) Except as provided in Article 11.3.3.1. and Section 11.5., the design and *construction* of a new *building system* or the extension of an existing *building system*, shall comply with all other Parts.

11.3.2. Extension of Buildings

11.3.2.1. Portion of Extended Buildings

(1) Where an existing *building* is extended,
(a) this Part applies to the existing portion of the *building*, and
(b) the extended portion of the *building* shall comply with all other Parts.

11.3.3. Renovation

11.3.3.1. Basic Renovation

r₄ **(1)** Except as provided in Sentence (2) and Article 11.3.3.2., *construction* may be carried out to maintain the existing *performance level* of all or part of an existing *building*, by the reuse, relocation or extension of the same or similar materials or components, to retain the existing character, structural uniqueness, heritage value, or aesthetic appearance of all or part of the *building* if, the *construction* will not adversely affect the early warning and evacuation systems, *fire separations*, the structural adequacy or create an unhealthy environment in the *building*.

(2) *Construction* in respect of a *hotel* may only be carried out in accordance with Sentence (1) provided that the *construction* will be in conformance with Part 9 of Division B of the Fire Code made under the *Fire Protection and Prevention Act, 1997.*

11.3.3.2. Extensive Renovation

r_2 (1) Where existing interior walls or ceilings or floor assemblies or roof assemblies are substantially removed in an existing *building* and new interior walls, ceilings, floor assemblies or roof assemblies are installed in the *building*, structural and fire-resistance elements shall be constructed in compliance with the requirements of the other Parts.

(2) Except as provided in Section 11.5., the proposed *construction* within an existing *suite* shall comply with the requirements of Section 3.8. where,

(a) the existing interior walls or floor assemblies within the *suite* are substantially removed in an existing *building*,
(b) new interior walls or floor assemblies are installed,
(c) the *suite* has an area greater than 300 m^2, and
(d) the *suite* is located on,
  (i) a *floor area* where the existing difference in elevation between the adjacent ground level and the floor level is not more than 200 mm, or
  (ii) a normally occupied *floor area* which is accessible by a passenger type elevator or other platform equipped passenger elevating device from an entrance *storey* where the existing difference in elevation between the adjacent ground level and the entrance *storey* level is not more than 200 mm.

r_2 (3) Except as described in Sentence (4), where existing interior walls or ceilings or floor assemblies or roof assemblies are substantially removed on any *storey* in an existing *building* and new interior walls, ceilings, floor assemblies or roof assemblies are installed, the *storey* shall be *sprinklered* if,

(a) the *storey* will contain a Group C *major occupancy*, and
(b) the *building* is over 3 *storeys* in *building height*.

r_2 (4) Sentence (3) does not apply where the *building*,

(a) conforms to Subclause 3.2.2.44.(1)(a)(ii), and
(b) contains *dwelling units* having *means of egress* conforming to Sentence 3.3.4.4.(9).

11.3.4. Plumbing

11.3.4.1. Extension, Material Alteration or Repair

(1) Notwithstanding Subsections 11.3.1. to 11.3.3., when an existing *building* is extended or subject to material alteration or repair, Part 7 applies,
(a) to the design and *construction* of *plumbing* in the extensions and those parts of the *building* subject to material alteration and repair, and
(b) to *plumbing* which is adversely affected by the extension, alteration or repair.

Section 11.4. Performance Level Evaluation and Compensating Construction

11.4.1. General

11.4.1.1. Performance Level

(1) The *performance level* of a *building* after *construction* shall not be less than the *performance level* of the *building* prior to *construction*.

(2) For the purposes of Sentence (1), reduction of *performance level* shall be determined in accordance with Subsection 11.4.2.

(3) Where the proposed *construction* would reduce the *performance level* of an existing *building*, compensating *construction* shall be required in conformance with Subsection 11.4.3.

11.4.2. Reduction in Performance Level

11.4.2.1. Structural

e_1 **(1)** The *performance level* of an existing *building* is reduced where after proposed *construction* in all or part of an existing *building*,
(a) the *major occupancy* will change to a different *major occupancy*,
(b) the *occupant load* will increase by more than 15%, or
(c) the *live load* will increase due to change in use within the same *major occupancy*,

and the existing structural floor and roof framing systems and their supporting members after the *construction* are not adequate to support the proposed *dead loads* and *live loads*.

11.4.2.2. Increase in Occupant Load

(1) Except as required in Sentences 11.4.2.5.(2) and (3), the *performance level* of an existing *building* is reduced where proposed *construction* will increase the *occupant load* of an existing *building* by more than 15%.

(2) The *performance level* of an existing *building* is reduced where proposed *construction* will increase the *occupant load* by 15% or less and the new *occupant load* will be more than 15% above the *occupant load* for which a fire alarm system is required under Sentence 3.2.4.1.(2).

r_4 **(3)** The *performance level* of an existing *building* is reduced where proposed *construction* will increase the *occupant load* by 15% or less and the new *occupant load* will be more than 15% above the existing *exit* capacity as required under Article 3.4.3.2.

11.4.2.3. Change of Major Occupancy

(1) Except as required in Sentence 11.4.2.5.(4), the *performance level* of an existing *building* is reduced where proposed *construction* will result in,

r_2 (a) except as provided in Sentence (6) the change of the *major occupancy* of all or part of an existing *building* to another *major occupancy* of a greater *hazard index*,

(b) the conversion of a *suite* of a Group C *major occupancy* into more than one *suite* of Group C *major occupancy*,

(c) a *suite* or part of a *suite* of a Group A, Division 2 or a Group A, Division 4 *major occupancy* is converted to a *gaming premises*,

(d) the change of a *farm building* or part of a *farm building* to a *major occupancy*,

(e) the change of a *building* or part of a *building* is to a *post-disaster building*, or

(f) the change in use of a *building* or part of a *building* where the previous *major occupancy* of the *building* or part of the *building* cannot be determined.

r_4 **(2)** For the purpose of this Article and Sentences 11.4.2.1.(1) and 11.4.2.5.(4), the change of use set out in Clauses (1)(b) to (f) shall also be deemed to constitute a change in *major occupancy*.

(3) The *performance level* of an existing *building* is reduced where the early warning and evacuation systems requirements of other Parts for the proposed *major occupancy* exceed those of the existing *building*.

(4) The *performance level* of an existing *building* is reduced where the proposed *major occupancy* in the *building* is not separated from the adjoining *major occupancies* by *fire separations* having *fire-resistance ratings* conforming to Tables 3.1.3.1. and 11.4.3.4.B.

(5) The *performance level* of an existing *building* is reduced where the *occupancy* of all or part of an existing *building* of *combustible construction* is changed to a new *major occupancy* that would require the *building*, if it were a new *building*, to be *constructed* of *noncombustible construction*.

r_2 r_5 **(6)** The *performance level* of an existing *building* is reduced where proposed *construction* will result in the change of the *major occupancy* of all or part of an existing *building* to a Group C *major occupancy* in a *building* over three *storeys* in *building height* except in a *building* conforming to Subclause 3.2.2.44.(1)(a)(ii) and having an egress facility conforming to Sentence 3.3.4.4.(9).

11.4.2.4. Plumbing

(1) The *performance level* of an existing *building* is reduced where the existing *building* is extended or subject to material alteration or repair, and *plumbing* in the existing *building* is adversely affected by the extension, alteration or repair.

11.4.2.5. Sewage Systems

(1) The *performance level* of an existing *building* is reduced where the existing *building* is extended or subject to material alteration or repair and a *sewage system* serving the existing *building* is adversely affected by the extension, alteration or repair of the existing *building*.

(2) Except as provided in Sentence (3), the *performance level* of an existing *building* is reduced where proposed *construction* will increase the *occupant load* of an existing *building*, and the new *occupant load* will result in the total daily design *sanitary sewage flow* of the *building*, calculated in accordance with Article 8.2.1.3., exceeding the capacity of any component of a *sewage system* serving the *building*.

e_1 **(3)** The *performance level* of an existing *dwelling unit* is reduced where *proposed construction* that,
(a) increases the number of bedrooms in the *dwelling unit*,
(b) exceeds 15% of the finished area of the *dwelling unit*, or
(c) adds new *plumbing fixtures to the dwelling unit*,

will result in the total daily design *sanitary sewage* flow of the *dwelling unit*, calculated in accordance with Article 8.2.1.3., exceeding the capacity of any component of a *sewage system* serving the *dwelling unit*.

(4) The *performance level* of an existing *building* is reduced where proposed *construction* will result in the change of a *major occupancy* of all or part of the existing *building* to another *major occupancy* and,
(a) the total daily design *sanitary sewage flow* of the proposed *major occupancy*, calculated in accordance with Article 8.2.1.3., exceeds the capacity of any component of a *sewage system* serving the *building*, or
(b) the type or amount of *sanitary sewage* which will, under the proposed *major occupancy*, be discharged to a *sewage system* serving the *building*, is prohibited by Article 8.1.3.1.

11.4.3. Compensating Construction

11.4.3.1. General

(1) Where the *performance level* of an existing *building* is reduced under Subsection 11.4.2., compensating *construction* shall be carried out in accordance with this Subsection.

(2) Except as provided in Sentence (3) compensating *construction* required under this Subsection applies to the part of the *building* being altered and shall include,
(a) *fire separations*, with the required *fire-resistance ratings*, separating the part being altered from the *floor areas* immediately above and below and from the immediate adjacent areas, and
(b) *access to exits* and *exits* from the *building*, where the alteration adversely affects the *exit* system of the *building*.

(3) Compensating *construction* required under this Subsection applies to the existing *building systems* that are adversely affected by the proposed *construction*.

11.4.3.2. Structural

(1) Where the *performance level* of an existing *building* is reduced under Sentence 11.4.2.1.(1),
(a) remedial measures shall be taken to support the proposed loads, or
(b) the portion of the floor affected by the proposed loads shall be restricted to the loading it will support and signs stating the restrictions shall be posted.

11.4.3.3. Increase in Occupant Load

(1) Where the *performance level* of an existing *building* is reduced under Sentences 11.4.2.2.(1), (2) or (3) the *building* shall be evaluated, and the early warning and evacuation systems shall be upgraded, in conformance with the applicable requirements of Table 11.4.3.3.

(2) Sentence (1) does not apply in a Group C *occupancy* where the new total *occupant load* is,
(a) 14 persons or fewer in a *boarding, lodging or rooming house*, except that where the *occupant load* is between 10 and 15 persons, an interconnected system of *smoke alarms* in corridors near stairways is required, or
(b) 16 persons or fewer in a *building* containing residential *suites* which are *dwelling units*, except that where the *occupant load* is between 10 and 17 persons, an interconnected system of *smoke alarms* in corridors near stairways is required.

(3) Where the *performance level* of an existing *building* is reduced under Sentence 11.4.2.2.(1), additional *construction* shall be required in order that the *building* or part of the *building* subject to the increase in *occupant load* conforms to the requirements of Sentence 6.2.2.1.(2), Subsection 3.7.4. and Article 9.31.1.1.

11.4.3.4. Change in Major Occupancy

(1) Where the *performance level* of an existing *building* is reduced under Sentence 11.4.2.3.(1), additional upgrading shall be required in conformance with Table 11.4.3.4.A. and so that the *construction index* of the *building* is increased to at least equal the *hazard index* of the new *major occupancy* that the *building* is to support.

r_4 **(2)** A *building* or part of the *building* subject to change of *major occupancy* shall conform to the requirements of Subsection 3.2.6., Sections 3.7., 3.11., 3.12., Sentences 6.2.2.1.(2), 6.2.3.9.(1) and 6.2.4.7.(10), Subsections 9.5.1. and 9.5.3. to 9.5.10., Section 9.7., Subsection 9.10.17., Sections 9.31. and 9.32., and Subsections 9.34.1. to 9.34.3. as they apply to the new *major occupancy* that the *building* or part of the *building* is to support.

(3) Where the *performance level* of an existing *building* is reduced under Sentence 11.4.2.3.(3), the *building* shall be evaluated, and the early warning and evacuation systems shall be upgraded, in conformance with the applicable requirements of Table 11.4.3.3.

(4) Where the *performance level* of an existing *building* is reduced under Sentence 11.4.2.3.(4), upgrading of those systems shall be required in conformance with the applicable requirements of Article 3.1.3.1. and Table 11.4.3.4.B.

(5) Where the *performance level* is reduced under Sentence 11.4.2.3.(5) the requirement for *noncombustible construction* is satisfied if the *building* is *sprinklered*.

r_2 **(6)** Where the *performance level* is reduced under Sentence 11.4.2.3.(6), the *storey* subject to the change shall be *sprinklered*.

11.4.3.5. Plumbing

(1) Where the *performance level* of an existing *building* is reduced under Sentence 11.4.2.4.(1), upgrading of *plumbing* in the existing *building* which is adversely affected by the extension, alteration or repair shall be required in conformance with Part 7.

11.4.3.6. Sewage Systems

(1) Where the *performance level* of an existing *building* is reduced under Article 11.4.2.5., upgrading of a *sewage system* which is adversely affected by the *construction*, increase in *occupant load*, increase in the total daily design *sanitary sewage* flow or change in amount or type of *sanitary sewage* shall be required in conformance with Part 8.

Section 11.5. Compliance Alternatives

11.5.1. Compliance Alternatives

11.5.1.1. Compliance Alternatives

r_4 **(1)** A *compliance alternative* shown in Tables 11.5.1.1.A., 11.5.1.1.B., 11.5.1.1.C., 11.5.1.1.D/E. or 11.5.1.1.F. may be substituted for a requirement contained in Part 3, 4, 6 or 8 where the *chief building official* is satisfied that compliance with the requirement is impracticable because,
(a) of structural or *construction* difficulties, or
(b) it is detrimental to the preservation of a *heritage building*.

r_4 **(2)** A *compliance alternative* shown in Tables 11.5.1.1.A., 11.5.1.1.B., 11.5.1.1.C., 11.5.1.1.D/E. or 11.5.1.1.F. may be substituted for a requirement contained in Part 9 or 12 without satisfying the *chief building official* that compliance with the requirement is impracticable.

Part 12
Resource Conservation

Section 12.4. Water Efficiency

12.4.1. General 3

Section 12.4. Water Efficiency

12.4.1. General

12.4.1.1. Plumbing Systems

(1) All *buildings* shall conform to the water efficiency requirements of Subsection 7.6.4.

Division C

Administrative Provisions

Part 1
General

Section 1.1. Administration

1.1.1. Administration 3

Section 1.2. Design and General Review

1.2.1. Design 3
1.2.2. General Review 7

Section 1.3. Permits and Inspections

1.3.1. Permits 8
1.3.2. Site Documents 15
1.3.3. Occupancy of Unfinished Building 16
1.3.4. Fire Department Inspection 18
1.3.5. Notices and Inspections 19
1.3.6. As Constructed Plans 22

Section 1.4. Search Warrant

1.4.1. Forms 22

Section 1.5. Designated Persons and Powers

1.5.1. General 25

Section 1.6. Prescribed Person

1.6.1. General 25

Section 1.9. Fees

1.9.1. Fees 26

Part 1

General

Section 1.1. Administration

1.1.1. Administration

1.1.1.1. Conformance with Administrative Requirements

(1) This Code shall be administered in conformance with the Act.

Section 1.2. Design and General Review

1.2.1. Design

1.2.1.1. Design by Architect or Professional Engineer

(1) Except as permitted in Sentences (2) and (3), the *construction*, including, for greater certainty, enlargement or alteration, of every *building* or part of it described in Table 1.2.1.1. and this Article shall be designed and reviewed by an *architect*, *professional engineer* or both.

(2) An *architect* may provide the services within the practice of professional engineering in any *building* described in Table 1.2.1.1., or a *professional engineer* may provide the services within the practice of architecture in any *building* described in Table. 1.2.1.1. where to do so does not constitute a substantial part of the services provided by the other profession related to the *construction* of the *building* and is necessary
(a) for the *construction* of the *building* and is incidental to the other services provided by the *architect* or *professional engineer*, or
(b) for coordination purposes.

Table 1.2.1.1.(4)
Design and General Review
Forming Part of Sentence 1.2.1.1.(1)

Building Classification by *Major Occupancy*	*Building* Description	Design and General Review by:
Assembly occupancy only	Every *building*	*Architect* and *professional engineer*(1)
Assembly occupancy and any other *major occupancy* except *industrial*	Every *building*	*Architect* and *professional engineer*(1)
Care or detention occupancy only	Every *building*	*Architect* and *professional engineer*(1)
Care or detention occupancy and any other *major occupancy* except *industrial*	Every *building*	*Architect* and *professional engineer*(1)
Residential occupancy only	Every *building* that exceeds 3 *storeys* in *building height*	*Architect* and *professional engineer*(1)
	Every *building* that exceeds 600 m^2 in *gross area* and that contains a *residential occupancy* other than a *dwelling unit* or *dwelling units*	*Architect*(2)
Residential occupancy only	Every *building* that exceeds 600 m^2 in *gross area* and contains a *dwelling unit* above another *dwelling unit*	*Architect*(2)
	Every *building* that exceeds 600 m^2 in *building area* contains 3 or more *dwelling units* and has no *dwelling unit* above another *dwelling unit*	*Architect*(2)
Residential occupancy and any other *major occupancy* except *industrial*, *assembly* or *care or detention occupancy*	Every *building* that exceeds 600 m^2 in *gross area* or 3 *storeys* in *building height*	*Architect* and *professional engineer*(1)
Business and personal services occupancy only	Every *building* that exceeds 600 m^2 in *gross area* or 3 *storeys* in *building height*	*Architect* and *professional engineer*(1)
Business and personal services occupancy and any other *major occupancy* except *industrial*, *assembly* or *care or detention occupancy*	Every *building* that exceeds 600 m^2 in *gross area* or 3 *storeys* in *building height*	*Architect* and *professional engineer*(1)
Mercantile occupancy only	Every *building* that exceeds 600 m^2 in *gross area* or 3 *storeys* in *building height*	*Architect* and *professional engineer*(1)
Column 1	2	3

Table 1.2.1.1.[4] (Cont'd)
Design and General Review
Forming Part of Sentence 1.2.1.1.(1)

Building Classification by *Major Occupancy*	*Building* Description	Design and General Review by:
Mercantile occupancy and any other *major occupancy* except *industrial, assembly* or *care or detention occupancy*	Every *building* that exceeds 600 m^2 in *gross area* or 3 *storeys* in *building height*	*Architect* and *professional engineer*[1]
Industrial occupancy only and where there are no subsidiary *occupancies*	Every *building* that exceeds 600 m^2 in *gross area* or 3 *storeys* in *building height*	*Architect* or *professional engineer*[3]
Industrial occupancy and one or more other *major occupancies* where the portion of the area occupied by one of the other *major* or subsidiary *occupancies* exceeds 600 m^2.	The non-industrial portion of every *building*	*Architect* and *professional engineer*[1]
	The industrial portion of every *building*	*Architect* or *professional engineer*[3]
Industrial occupancy and one or more other *major occupancies* where no portion of the area occupied by one of the other *major* or subsidiary *occupancies* exceeds 600 m^2.	Every *building* that exceeds 600 m^2 in *gross area* or 3 *storeys* in *building height*	*Architect* or *professional engineer*[3]
Column 1	2	3

Notes To Table 1.2.1.1.:

(1) An *architect* shall provide services within the practice of architecture and a *professional engineer* shall provide the services within the practice of professional engineering.

(2) An *architect* may engage a *professional engineer* to provide services within the practices of professional engineering.

(3) Only a *professional engineer* may provide services within the practice of professional engineering.

(4) Requirements for design and general review by an *architect* or *professional engineer* or a combination of both for the *construction*, enlargement or alteration of a *building* are set out in the *Architects Act* and the *Professional Engineers Act*.

(3) The requirement for an *architect* does not apply to the preparation or provision of a design for interior space for a *building*, including finishes, fixed or loose furnishings, equipment, fixtures and partitioning of space, and related exterior elements such as signs, finishes and glazed openings used for display purposes, that does not affect or is not likely to affect,

(a) the structural integrity,
(b) a fire safety system or *fire separation*,
(c) a main entrance or *public corridor* on a floor,
(d) an *exit* to a public thoroughfare or to the exterior,
(e) the *construction* or location of an exterior wall, or
(f) the usable floor space through the addition of a *mezzanine*, infill or other similar element,

of the *building*.

(4) Where a *building* or part of it described in Table 1.2.1.1. is designed by an *architect* or a *professional engineer* or a combination of both as required by this Article, all plans, sketches, drawings, graphic representations, specifications and other documents that are prepared by an *architect*, *professional engineer* or both and that form the basis for the issuance of a permit under section 8 of the Act or any changes to it authorized by the *chief building official* shall bear the signature and seal of the *architect*, *professional engineer* or both, as applicable.

(5) Where the *foundations* of a *building* are to be constructed below the level of the footings of an adjacent *building* and within the angle of repose of the *soil*, as drawn from the bottom of the footings, the *foundations* shall be designed by a *professional engineer*.

(6) The thermal design of a *building* in accordance with Subsection 12.3.3. of Division B shall be prepared and provided by an *architect* or *professional engineer* or a combination of both.

(7) A sprinkler protected glazed wall assembly described in Article 3.1.8.18. of Division B shall be designed and reviewed by a *professional engineer*.

(8) A *shelf and rack storage system* described in Section 3.16. of Division B shall be designed and reviewed by a *professional engineer*.

r_4 **(9)** The time-based egress analysis for a *shelf and rack storage system* described in Sentence 3.16.1.7.(7) of Division B shall be prepared and provided by an *architect* or *professional engineer* or a combination of both.

(10) The supporting framing structure and anchorage system for a tent occupying an area greater than 225 m^2 shall be designed and reviewed by a *professional engineer*.

(11) A sign structure shall be designed by an *architect* or *professional engineer* where it is,
(a) a ground sign that exceeds 7.5 m in height above the adjacent finished ground,
(b) a projecting sign that weighs more than 115 kg, or
(c) a roof sign that has any face that is more than 10 m^2.

(12) A projecting sign attached or fastened in any manner to a parapet wall shall be designed by an *architect* or *professional engineer*.

1.2.2. General Review

1.2.2.1. General Review by Architect or Professional Engineer

(1) Except as permitted in Sentence (2), a person who intends to *construct* or have constructed a *building* required to be designed by an *architect*, *professional engineer* or both, shall ensure that an *architect*, *professional engineer* or both are retained to undertake the general review of the *construction* of the *building* in accordance with the performance standards of the Ontario Association of Architects or the Association of Professional Engineers of Ontario, as applicable, to determine whether the *construction* is in general conformity with the plans, sketches, drawings, graphic representations, specifications and other documents that are prepared by an *architect*, *professional engineer* or both and that form the basis for the issuance of a permit under section 8 of the Act or any changes to it authorized by the *chief building official*. Copies of written reports arising out of the general review shall be forwarded to the *chief building official* or *registered code agency*, as the case may be, by the *architect*, *professional engineer* or both who have been retained to undertake the general review of the *construction* of the *building*.

(2) An *architect* or a *professional engineer* need not be retained to undertake the general review of *construction* of a *building* where the *building* is designed in accordance with Subsection 12.3.3. of Division B.

1.2.2.2. Restriction for General Review

(1) Only an *architect* may carry out or provide the general review of the *construction* of a *building*
(a) that is constructed in accordance with a design prepared or provided by an *architect*, or

(b) in relation to services that are provided by an *architect* in connection with the design in accordance with which the *building* is constructed.

(2) Only a *professional engineer* may carry out or provide the general review of the *construction* of a *building*
(a) that is constructed in accordance with a design prepared or provided by a *professional engineer*, or
(b) in relation to services that are provided by a *professional engineer* in connection with the design in accordance with which the *building* is constructed.

1.2.2.3. Demolition of a Building

(1) The applicant for a permit respecting the *demolition* of a *building* shall retain a *professional engineer* to undertake the general review of the project during *demolition*, where
(a) the *building* exceeds 3 *storeys* in *building height* or 600 m^2 in *building area*,
(b) the *building* structure includes pre-tensioned or post-tensioned members,
(c) it is proposed that the *demolition* will extend below the level of the footings of any adjacent *building* and occur within the angle of repose of the *soil*, drawn from the bottom of such footings, or
(d) explosives or a laser are to be used during the course of *demolition*.

Section 1.3. Permits and Inspections

1.3.1. Permits

1.3.1.1. Requirement for Permits

(1) A person is exempt from the requirement to obtain a permit under section 8 of the Act
(a) for the *demolition* of a *building* located on a farm,
(b) subject to Sentence (2), for the *construction* or *demolition* of a *building* in territory without municipal organization, or
(c) for the *construction* of a Class 1 *sewage system*.

(2) The exemption in Clause (1)(b) from the requirement to obtain a permit does not apply to the *construction* of a *sewage system* in territory without municipal organization.

(3) Where a permit is required for the *demolition* of a *building* in Sentence 1.2.2.3.(1), descriptions of the structural design characteristics of the *building* and the method of *demolition* shall be included in the application for a permit to demolish the *building*.

(4) No person shall commence *demolition* of a *building* or any part of a *building* before the *building* has been vacated by the occupants except where the safety of the occupants is not affected.

(5) A tent or group of tents is exempt from the requirement to obtain a permit under section 8 of the Act and is exempt from compliance with the Code provided that the tent or group of tents are:
(a) not more than 60 m^2 in aggregate ground area,
(b) not attached to a *building*, and
(c) constructed more than 3 m from other structures.

1.3.1.2. Applications for Permits under Section 8 of the Act

(1) An application for a permit under section 8 of the Act to *construct* or *demolish* a *building* shall be made by
(a) the owner of the property on which the proposed *construction* or *demolition* is to take place, or
(b) the authorized agent of the owner referred to in Clause (a).

(2) An application referred to in Sentence (1) that is made after June 30, 2005 shall be in a form approved by the *Minister*.

(3) In Sentence (1),

owner includes, in respect of the property on which the *construction* or *demolition* will take place, the registered owner, a lessee and a mortgagee in possession.

1.3.1.3. Period Within Which a Permit is Issued or Refused

(1) Subject to Sentences (2) and (3), if an application for a permit under subsection 8(1) of the Act that meets the requirements of Sentence (5) is submitted to a *chief building official*, the *chief building official* shall, within the time period set out in Column 3 of Table 1.3.1.3. corresponding to the class of *building* described in Column 2 of Table 1.3.1.3. for which the application is made,

(a) issue the permit, or
(b) refuse to issue the permit and provide in writing all of the reasons for the refusal.

(2) If an application for a permit under subsection 8(1) of the Act proposes *construction* or *demolition* of two or more *buildings* of different classes described in Column 2 of Table 1.3.1.3. that have different time periods in Column 3 of Table 1.3.1.3., the longer of the time periods shall be the time period for the purposes of Sentence (1).

(3) If an application for a permit under subsection 8(1) of the Act proposes *construction* or *demolition* of a *building* described in Sentence (4), the time period for the purposes of Sentence (1) shall be the longer of
(a) 10 days, and
(b) the time period corresponding to the class of the *building* described in Column 2 of Table 1.3.1.3. that the *building* in Sentence (4) serves, if any.

(4) A *building* referred to in Sentence (3) is:
(a) a structure occupying an area of 10 m^2 or less that contains *plumbing*, including the *plumbing* appurtenant to it,
(b) *plumbing* not located in a structure,
(c) a *sewage system*, or
(d) a structure designated in Article 1.3.1.1. of Division A.

(5) The requirements for an application referred to in Sentence (1) for a permit under subsection 8(1) of the Act are:
(a) that the application be made in the form described in Sentence 1.3.1.2.(2),
(b) that the application be signed by a person described in Clause 1.3.1.2.(1)(a) or (b),
(c) that all applicable fields on the application form and required schedules are completed,
(d) that all attachments indicated as being attached to the application are submitted with the application, and
(e) that the application be accompanied by the types and quantities of plans and specifications that are prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the Act.

(6) The time period described in Sentences (1) to (3) shall begin on the day following the later of

(a) the day on which an application meeting the requirements of Sentence (5) is submitted to the *chief building official*, and

(b) the day on which payment is made of all fees that are required, under a by-law, regulation or resolution made under clause 7(1)(c) of the Act, to be paid when the application is made.

(7) Subject to Sentences (8) and (9), the time periods described in Column 3 of Table 1.3.1.3. shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

(8) The time period in Sentence (9) applies where

(a) an application is made for the *construction* of a *building* that is served by a *sewage system*,

(b) *construction* is proposed in respect of the *sewage system* that serves the *building*, and

r_1 (c) a board of health, conservation authority, planning board or the council of an upper-tier municipality is responsible for the enforcement of the provisions of the Act and this Code related to the *sewage system* under section 3.1 of the Act or pursuant to an agreement under section 6.2 of the Act.

(9) The time period described in Sentences (1) to (3) for an application referred to in Clause (8)(a) shall begin on the day following the latest of

(a) the day on which an application meeting the requirements of Sentence (5) is submitted to the *chief building official*,

(b) the day on which payment is made of all fees that are required, under a by-law, regulation or resolution made under clause 7(1)(c) of the Act, to be paid when the application is made, and

(c) the day on which a permit for the *construction* of the *sewage system* referred to in Clause (8)(b) is issued.

Table 1.3.1.3.
Period Within Which Permit Shall be Issued or Refused
Forming Part of Article 1.3.1.3.

r_4

Row Number	Class of *Building*	Time Period
1	(a) A detached house, semi-detached house, townhouse, or row house where no *dwelling unit* is located above another *dwelling unit*. (b) A detached structure that serves a *building* described in Clause (a) and does not exceed 55 m^2 in *building area*. (c) A tent to which Section 3.14. of Division B applies. (d) A sign to which Section 3.15. of Division B applies.	10 days
2	(a) *Buildings* described in Clauses 1.1.2.4.(1)(a), (b) or (c) of Division A, other than *buildings* described in Column 2 of any of Rows 1 and 4 of this Table. (b) *Farm buildings* that do not exceed 600 m^2 in *building area*.	15 days
3	(a) *Buildings* described in Clauses 1.1.2.2.(1)(a) or (b) of Division A, other than *buildings* described in Column 2 of any of Rows 1 and 4 of this Table. (b) *Farm buildings* exceeding 600 m^2 in *building area*.	20 days
4	(a) *Post-disaster buildings*. (b) *Buildings* to which Subsection 3.2.6. of Division B or any provision in Articles 3.2.8.3. to 3.2.8.11. of Division B applies.	30 days
Column 1	2	3

1.3.1.4. Permits Under Section 10 of the Act

(1) Except as provided in Sentence (2), the following changes in use of a *building* or part of a *building* constitute an increase in hazard for the purposes of section 10 of the Act and require a permit under section 10 of the Act:

(a) a change of the *major occupancy* of all or part of a *building* that is designated with a "Y" in Table 1.3.1.4. takes place,

(b) a *suite* of a Group C *major occupancy* is converted into more than one *suite* of Group C *major occupancy*,

(c) a *suite* or part of a *suite* of a Group A, Division 2 or a Group A, Division 4 *major occupancy* is converted to a *gaming premises*,

(d) a *farm building* or part of a *farm building* is changed to a *major occupancy*,

(e) a *building* or part of a *building* is changed to a *post-disaster building*, or

(f) the use of a *building* or part of a *building* is changed and the previous *major occupancy* of the *building* or part of the *building* cannot be determined.

Table 1.3.1.4.
Permit Required for Change of Use
Forming Part of Sentence 1.3.1.4.(1)(1)

		FROM(2)												
		A-1	A-2	A-3	A-4	B-1	B-2	B-3	C	D	E	F-1	F-2	F-3
TO(3)	A-1	N(5)	Y	Y	N(5)	Y	Y	Y	Y	Y	Y	Y	Y	Y
	A-2	Y	N(5)	Y	N(5)	Y	Y	Y	Y	Y	Y	Y	Y	Y
	A-3	Y	Y	N(5)	N(5)	Y	Y	Y	Y	Y	Y	Y	Y	Y
	A-4	Y	Y	Y	N(5)	Y	Y	Y	Y	Y	Y	Y	Y	Y
	B-1	Y	Y	Y	N(5)	N(5)	Y	Y	Y	Y	Y	Y	Y	Y
	B-2	Y	Y	Y	N(5)	Y	N(5)	Y	Y	Y	Y	Y	Y	Y
	B-3	Y	Y	Y	N(5)	Y	N(5)	N(5)	Y	Y	Y	Y	Y	Y
	C	Y	Y	Y	N(5)	Y	N(5)	N(5)	(4)	Y	Y	Y	Y	Y
	D	N(5)	N(5)	Y	N(5)	Y	N(5)	N(5)	Y	N(5)	Y	Y	N(5)	N(5)
	E	Y	Y	Y	N(5)	Y	Y	Y	Y	Y	N(5)	Y	Y	Y
	F-1	Y	Y	Y	N(5)	Y	Y	Y	Y	Y	Y	N(5)	Y	Y
	F-2	Y	Y	Y	N(5)	Y	Y	Y	Y	Y	Y	N(5)	N(5)	Y
	F-3	Y	N(5)	Y	N(5)	Y	Y	Y	Y	N(5)	N(5)	N(5)	N(5)	N(5)

Notes to Table 1.3.1.4.:

(1) See Clause 1.3.1.4.(1)(a) and Clauses 3.17.1.1.(1)(a) and 9.41.1.1.(1)(a) of Division B.

(2) *Major occupancy* of all or part of a *building* before change of use.

(3) *Major occupancy* of all or part of a *building* after change of use.

(4) See Clause 1.3.1.4.(1)(b) and Clauses 3.17.1.1.(1)(b), 9.41.1.1.(1)(b) and 11.4.2.3.(1)(b) of Division B.

(5) "N" is only applicable where the *major occupancy* of the entire *suite* is changed.

(2) A person is exempt from the requirement to obtain a permit under Section 10 of the Act where the change in use of the *building* or part of the *building* will result from proposed *construction* and a permit under Section 8 of the Act has been issued in respect of such *construction*.

(3) A person is exempt from the requirement to obtain a permit under Section 10 of the Act for the change of use of a *building* in unorganized territory.

1.3.1.5. Conditional Permits

(1) The *chief building official* shall not issue a conditional permit for any stage of *construction* under subsection 8(3) of the Act unless compliance with the following *applicable laws* has been achieved in respect of the *construction* of the proposed *building*

(a) regulations made by a conservation authority under clause 28(1)(c) of the *Conservation Authorities Act* with respect to permission of the authority for the *construction* of a *building* or structure if, in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development,

(b) section 5 of the *Environmental Assessment Act* with respect to the approval of the Minister or the Environmental Review Tribunal to proceed with an undertaking,

(c) subsection 24(3) of the *Niagara Escarpment Planning and Development Act*,

(c.1) subsection 27(3) of the *Ontario Heritage Act*,

(d) subsection 30(2) of the *Ontario Heritage Act* with respect to a consent of the council of a *municipality* to the alteration or *demolition* of a *building* where the council of the *municipality* has given a notice of intent to designate the *building* under subsection 29(3) of that Act,

(e) section 33 of the *Ontario Heritage Act* with respect to the consent of the council of a *municipality* for the alteration of property,

(f) section 34 of the *Ontario Heritage Act* with respect to the consent of the council of a *municipality* for the *demolition* of a *building*,

(g) section 34.5 of the *Ontario Heritage Act* with respect to the consent of the Minister to the alteration or *demolition* of a designated *building*,

(h) subsection 34.7 (2) of the *Ontario Heritage Act* with respect to a consent of the Minister to the alteration or *demolition* of a *building* where the Minister has given a notice of intent to designate the *building* under section 34.6 of that Act,

(h.1) by-laws made under section 40.1 of the *Ontario Heritage Act*,
(i) section 42 of the *Ontario Heritage Act* with respect to the permit given by the council of a *municipality* for the erection, alteration or *demolition* of a *building*.

(2) For the purposes of issuing a conditional permit under subsection 8(3) of the Act, a person is exempt from the requirement in clause 8(3)(a) of the Act of compliance with by-laws passed under sections 34 and 38 of the *Planning Act* where

(a) a committee of adjustment has made a decision under section 45 of the *Planning Act* authorizing one or more minor variances from the provisions of any by-laws made under sections 34 and 38 of that Act,
(b) such minor variance or variances result in the achievement of full compliance with such by-laws, and
(c) no person informed the committee of adjustment of objections to the minor variances either in writing or in person at the hearing of the application.

(3) For the purposes of issuing a conditional permit under subsection 8(3) of the Act, a person is exempt from the requirement in clause 8(3) of the Act of compliance with by-laws passed under sections 34 and 38 of the *Planning Act* where the *construction* in respect of which the conditional permit is issued is required in order to comply with an order issued under subsection 21(1) of the *Fire Protection and Prevention Act, 1997* or under Subsection 15.9(4) of the Act.

(4) A permit issued under Subsection 8(3) of the Act shall indicate its conditional nature.

1.3.2. Site Documents

1.3.2.1. Permit Posting

(1) Where a permit has been issued pursuant to the Act, the person to whom it is issued shall have the permit or a copy of it posted at all times during *construction* or *demolition* in a conspicuous place on the property in respect of which the permit was issued.

1.3.2.2. Documentation on Site

(1) The person in charge of the *construction* of the *building* shall keep and maintain on the site of the *construction*

(a) at least one copy of drawings and specifications certified by the *chief building official* or a person designated by the *chief building official* to be a copy of those submitted with the application for the permit to *construct* the *building*, together with changes that are authorized by the *chief building official* or a person designated by the *chief building official*, and

(b) authorization or facsimiles of it received from the Building Materials Evaluation Commission, including specified terms and conditions.

1.3.3. Occupancy of Unfinished Building

1.3.3.1. Occupancy Permit

(1) Except as permitted in Sentence 1.3.3.2.(1), a person may occupy or permit to be occupied any *building* or part of it that has not been fully completed at the date of occupation where the *chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it prior to its completion in accordance with Sentence (2).

(2) The *chief building official* or a person designated by the *chief building official* shall issue a permit authorizing occupation of a *building*, where

(a) the structure of the *building* or part of it is completed to the roof,

(b) the enclosing walls of the *building* or part of it are completed to the roof,

(c) the walls enclosing the space to be occupied are completed, including balcony *guards*,

(d) all required *fire separations* and *closures* are completed on all *storeys* to be occupied,

(e) all required *exits* are completed and fire separated including all doors, door hardware, self-closing devices, balustrades and handrails from the uppermost floor to be occupied down to *grade* level and below if an *exit* connects with lower *storeys*,

(f) all shafts including *closures* are completed to the floor-ceiling assembly above the *storey* to be occupied and have a temporary *fire separation* at such assembly,

(g) measures have been taken to prevent access to parts of the *building* and site that are incomplete or still under *construction*,

(h) floors, halls, lobbies and required *means of egress* are kept free of loose materials and other hazards,
(i) if service rooms should be in operation, required *fire separations* are completed and all *closures* installed,
(j) all *building drains*, *building sewers*, *water systems*, *drainage systems* and *venting systems* are complete and tested as operational for the *storeys* to be occupied,
(k) required lighting, heating and electrical supply are provided for the *suites*, rooms and common areas to be occupied,
(l) required lighting in corridors, stairways and *exits* is completed and operational up to and including all *storeys* to be occupied,
(m) required standpipe, sprinkler and fire alarm systems are complete and operational up to and including all *storeys* to be occupied, together with required pumper connections for such standpipes and sprinklers,
(n) required fire extinguishers have been installed on all *storeys* to be occupied,
(o) main garbage rooms, chutes and ancillary services thereto are completed to *storeys* to be occupied,
(p) required fire fighting access routes have been provided and are accessible, and
(q) the *sewage system* has been completed and is operational.

(3) Where a *registered code agency* has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of the *building*, the *chief building official* or a person designated by the *chief building official* shall issue the permit referred to in Sentence (2) after receipt of a *certificate for the occupancy of a building not fully completed* issued by the *registered code agency* in respect of the *building*.

1.3.3.2. Conditions for Residential Occupancy

(1) A person may occupy or permit to be occupied a *building* intended for *residential occupancy* that has not been fully completed at the date of occupation provided that
(a) the *building*
  (i) is of three or fewer *storeys* in *building height* and has a *building area* not exceeding 600 m^2,
  (ii) has not more than 1 *dwelling unit* above another *dwelling unit*,
  (iii) has not more than 2 *dwelling units* sharing a common *means of egress*, and
  (iv) has no accommodation for tourists,

(b) the following *building* components and systems are complete, operational and inspected:
   (i) required *exits*, handrails and *guards*, fire alarm and detection systems, and *fire separations*,
   (ii) required exhaust fume barriers and self-closing devices on doors between an attached or built-in garage and a *dwelling unit*, and
   (iii) water supply, sewage disposal, lighting and heating systems,

(c) the following *building* components and systems are complete, operational, inspected and tested:
   (i) *water systems*,
   (ii) *building drains* and *building sewers*, and
   (iii) *drainage systems* and *venting systems*, and

(d) where applicable, the *building* conforms to Article 3.1.1.3. or 9.1.1.7. of Division B.

1.3.3.3. Notification

(1) Where a person has occupied or permitted the occupancy of a *building* under this Subsection, such person shall notify the *chief building official* forthwith upon completion of the *building*.

1.3.4. Fire Department Inspection

1.3.4.1. Fire Department Approval

(1) Subject to Sentence (2), if the council of a *municipality* assigns specific responsibility for the enforcement of any portion of this Code respecting fire safety matters to an *inspector* who is the chief of the fire department of the *municipality*, the *chief building official* shall not issue a permit to *construct* a *building* unless the *inspector* approves the drawings submitted with the application for the permit as complying with that portion of this Code.

(2) If a *registered code agency* has been appointed under clause 4.1(4)(a) or (c) of the Act

(a) a *municipality* shall not assign responsibility under Sentence (1) to the chief of the fire department with respect to a *building* for which the *registered code agency* has been appointed, and

(b) any assignment of responsibility under Sentence (1) with respect to a *building* for which the *registered code agency* is appointed shall be cancelled as of the date of the appointment.

1.3.5. Notices and Inspections

1.3.5.1. Prescribed Notices

(1) This Article sets out the notices that are required under section 10.2 of the Act.

(2) The person to whom a permit under section 8 of the Act is issued shall notify the *chief building official* or, where a *registered code agency* is appointed under the Act in respect of the *construction* to which the notice relates, the *registered code agency* of:

(a) readiness to *construct* footings,

(b) substantial completion of footings and *foundations* prior to commencement of backfilling,

(c) substantial completion of structural framing and ductwork and piping for heating and *air-conditioning* systems, if the *building* is within the scope of Part 9 of Division B,

(d) substantial completion of structural framing and roughing-in of heating, ventilation, *air-conditioning* and air-contaminant extraction equipment, if the *building* is not a *building* to which Clause (c) applies,

(e) substantial completion of insulation, *vapour barriers* and *air barriers*,

(f) substantial completion of all required *fire separations* and *closures* and all fire protection systems including standpipe, sprinkler, fire alarm and emergency lighting systems,

(g) substantial completion of fire access routes,

(h) readiness for inspection and testing of:

  (i) *building sewers* and *building drains*,

  (ii) *water service pipes*,

  (iii) *fire service mains*,

  (iv) *drainage systems* and *venting systems*,

  (v) the *water distribution system*, and

  (vi) *plumbing* fixtures and *plumbing* appliances,

(i) readiness for inspection of suction and gravity outlets, covers and suction piping serving outlets of an *outdoor pool* described in Clause 1.3.1.1.(1)(j) of Division A, a *public pool* or a *public spa*,

(j) substantial completion of the circulation / *recirculation system* of an *outdoor pool* described in Clause 1.3.1.1.(1)(j) of Division A, a *public pool* or *public spa* and substantial completion of the pool before it is first filled with water,

(k) readiness to *construct* the *sewage system*,

(l) substantial completion of the installation of the *sewage system* before the commencement of backfilling,

(m) substantial completion of installation of *plumbing* not located in a structure, before the commencement of backfilling, and
(n) completion of *construction* and installation of components required to permit the issue of an occupancy permit under Sentence 1.3.3.1.(2) or to permit occupancy under Sentence 1.3.3.2.(1), if the *building* or part of the *building* to be occupied is not fully completed.

1.3.5.2. Additional Notices

(1) A *principal authority* may pass a by-law or resolution or make a regulation under clause 7(1)(e) of the Act, as part of its responsibility for the enforcement of the Act, in order to establish time periods within which notice of one or more of the following stages of *construction* must be given:
(a) commencement of *construction* of the *building*,
(b) substantial completion of structural framing for each *storey*, if the *building* is a type of *building* that is within the scope of Parts of Division B other than Part 9 of Division B,
(c) commencement of *construction* of:
  (i) masonry fireplaces and masonry *chimneys*,
  (ii) factory-built fireplaces and allied *chimneys*,
  (iii) *stoves*, *ranges*, *space heaters* and add-on *furnaces* using solid fuels and allied *chimneys*,
(d) substantial completion of interior finishes,
(e) substantial completion of heating, ventilating, *air-conditioning* and air-contaminant extraction equipment,
(f) substantial completion of exterior cladding,
(g) substantial completion of site grading,
(h) substantial completion of the pool deck and dressing rooms for a *public pool* or *public spa* and readiness for inspection of the emergency stop system for a *public pool* or *public spa*, and
(i) completion and availability of drawings of the *building* as constructed.

(2) The person to whom a permit under section 8 of the Act is issued shall notify the *chief building official* or, if a *registered code agency* is appointed under the Act in respect of the *construction* to which the notice relates, the *registered code agency* of the stages of *construction* for which a time period for giving notice is required under Sentence (1).

1.3.5.3. Prescribed Inspections

(1) Except as provided in Sentence (2), an *inspector* or *registered code agency*, as the case may be, shall, not later than two days after receipt of a notice given under Sentence 1.3.5.1.(2), undertake a site inspection of the *building* to which the notice relates.

(2) Where a notice given under Sentence 1.3.5.1.(2) relates to matters described in Clause 1.3.5.1.(2)(k) or (l), an *inspector* or *registered code agency*, as the case may be, shall, not later than five days after receipt of the notice, undertake a site inspection of the *sewage system* to which the notice relates.

(3) When undertaking an inspection required under Sentence (1) or (2), the *inspector* or *registered code agency*, as the case may be, may consider reports concerning whether the *building* or a part of the *building* complies with the Act or this Code.

(4) The time periods referred to in Sentences (1) and (2) shall begin on the day following the day on which the notice is given.

(5) The time periods referred to in Sentences (1) and (2) shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

1.3.5.4. Exemption

(1) A person is exempt from the requirement in Sentences 1.3.5.1.(2) and 1.3.5.2.(2) to give notice to the *chief building official* in respect of *construction* if
(a) a permit in respect of the *construction* was issued to the person under section 8 of the Act before July 1, 2005, and
(b) the person notifies the *chief building official* in accordance with
    (i) Sentence 2.4.5.1.(1) of Ontario Regulation 403/97, as it read on June 30, 2005, and
    (ii) the by-law passed by the *municipality* under clause 7(1)(e) of the Act, as the by-law read on June 30, 2005.

(2) Article 1.3.5.3. does not apply to *construction* to which Sentence (1) relates.

1.3.5.5. Construction of Sewage Systems

(1) The following information is prescribed for the purposes of subsection 15.12(3) of the Act and must be provided to the *chief building official* before the commencement of the *construction* of a *sewage system*:
(a) the information described in Sentence 3.3.4.1.(2) as it relates to
  (i) the person registered under Article 3.3.3.2., and
  (ii) the person with the qualifications described in Clause 3.2.3.2.(1)(a) who will supervise *construction* on-site of the *sewage system*, and
(b) the name and telephone number of the representative of the person described in Subclause (a)(i) who may be contacted by the *chief building official* in respect of the *construction* of the *sewage system*.

1.3.5.6. Orders

(1) An order issued under subsection 12(2), 13(1), 13(6) or 14(1) or clause 18(1)(f) of the Act shall be in a form approved by the *Minister*.

1.3.6. As Constructed Plans

1.3.6.1. Application

(1) Where the council of a *municipality* has passed a by-law pursuant to clause 7(1)(g) of the Act, the *chief building official* may require that *as constructed plans* for the whole of, or any part or system of, a *building* or any class of *buildings* be provided by the persons responsible for the *construction*.

Section 1.4. Search Warrant

1.4.1. Forms

1.4.1.1. Information & Warrant Forms

(1) An information to obtain a warrant to enter and search lands and *buildings* under subsection 21(1) of the Act shall be in Form 1.4.1.A.

(2) A warrant to enter and search lands and *buildings* under subsection 21(1) of the Act shall be in Form 1.4.1.B.

Form 1.4.1.A.
INFORMATION TO OBTAIN SEARCH WARRANT UNDER SECTION 21 OF THE BUILDING CODE ACT, 1992

Building Code Act, 1992

ONTARIO COURT (PROVINCIAL DIVISION)
PROVINCE OF ONTARIO

This is the information of ______________________________
(name)

of ______________________, ______________________.
(address) (occupation)

I have reasonable ground to believe and do believe that the offence of __________ contrary to Building Code Act, 1992 Section ________ has been committed and that the entry into and search of a certain building, receptacle or place, namely,

____
(building, receptacle or place)

of ______________________, at ______________________
(owner) (address)

will afford the following evidence: ______________________________

____
(describe evidence to be searched for, including things to be seized, if any)

relevant to the commission of the offence.
And I further say that my grounds for so believing are:

____

Therefore, I request that a search warrant be issued to

check appropriate box

☐ enter into and search the said ______________________
(building, receptacle or place)
______________________ for the said evidence.

☐ enter into and search the said ______________________
(building, receptacle or place)
______________________ for the said evidence and to seize

the following things: ______________________.
(describe things to be seized)

____
Informant

Sworn before me at ______________,

this _____ day of ______________, _____.

____
Provincial Judge or Justice of the Peace

Form 1.4.1.B.
SEARCH WARRANT UNDER SECTION 21 OF THE BUILDING CODE ACT, 1992

Building Code Act, 1992

ONTARIO COURT (PROVINCIAL DIVISION)
PROVINCE OF ONTARIO

To: ____.

Whereas, on the information on oath of ______________________________,
I am satisfied that there is reasonable ground to believe that the offence of __________
____________________________________ contrary to Building Code Act, 1992
Section _______________ has been committed and that ______________________
____

(describe evidence to be searched for, including things to be seized, if any)

that there is reasonable ground to believe will afford evidence of the said offence may be
found at ____
____

(building, receptacle or place)

of ___________________________, at ___________________________________

(owner) (address)

hereinafter called the premises.

This is therefore to authorize you to enter such ______________________________
____

(name or location of building, receptacle or place)

between the hours of 6:00 a.m. and 9:00 p.m., or ______________________________
____

(time warrant to be executed)

check appropriate box

☐ and to search for the said evidence.

☐ and to search for the said evidence and to seize the following things
____

(describe things to be seized)

____

and carry them before me or another Provincial Judge or Justice of the Peace so that they may be dealt with according to the law.

This warrant expires on the _________ day of ______________, ________, a day not later than the fifteenth day after its issue.

Issued at ______________________________,
this _____ day of _________________, _______.

____
Provincial Judge or Justice of the Peace

Section 1.5. Designated Persons and Powers

1.5.1. General

1.5.1.1. General

(1) The *director* and employees of the Ministry of Municipal Affairs and Housing specified by the *director* are designated for the purposes of the enforcement of the Act and this Code in relation to the qualifications of:
(a) *chief building officials*,
(b) *inspectors*,
(c) *registered code agencies*,
(d) persons engaging in the activities described in subsection 15.11(5) of the Act, and
(e) persons engaged in the business of *constructing* on site, installing, repairing, servicing, cleaning or emptying *sewage systems*.

(2) The *director* may, for the purposes set out in Sentence (1), exercise the following powers under the Act of a *chief building official*:
(a) certify for the purposes of subsection 37(2) of the Act statements as to any matter of record in the office of the *director*, and
(b) apply for an order under section 38 of the Act.

(3) The employees of the Ministry of Municipal Affairs and Housing designated by the *director* may, for the purposes set out in Sentence (1), exercise the following powers under the Act of an *inspector*:
(a) subject to section 16 of the Act, exercise the powers of entry for inspection purposes in subsection 12(1) of the Act, and
(b) exercise the powers of an *inspector* under section 18 of the Act.

(4) Sections 15.23 and 19 of the Act apply to the exercise of powers under this Article by the *director* and employees of the Ministry of Municipal Affairs and Housing designated by the *director*.

Section 1.6. Prescribed Person

1.6.1. General

1.6.1.1. General

(1) The *director* is prescribed for the purposes of section 38.1 of the Act.

Section 1.9. Fees

1.9.1. Fees

1.9.1.1. Annual Report

(1) The report referred to in subsection 7(4) of the Act shall contain the following information in respect of fees authorized under clause 7(1)(c) of the Act:
(a) total fees collected in the 12-month period ending no earlier than three months before the release of the report,
(b) the direct and indirect costs of delivering services related to the administration and enforcement of the Act in the area of jurisdiction of the *principal authority* in the 12-month period referred to in Clause (a),
(c) a break-down of the costs described in Clause (b) into at least the following categories:
    (i) direct costs of administration and enforcement of the Act, including the review of applications for permits and inspection of *buildings*, and
    (ii) indirect costs of administration and enforcement of the Act, including support and overhead costs, and
(d) if a reserve fund has been established for any purpose relating to the administration or enforcement of the Act, the amount of the fund at the end of the 12-month period referred to in Clause (a).

(2) The *principal authority* shall give notice of the preparation of a report under subsection 7(4) of the Act to every person and organization that has requested that the *principal authority* provide the person or organization with such notice and has provided an address for the notice.

1.9.1.2. Change of Fees

(1) Before passing a by-law, regulation or resolution under clause 7(1)(c) of the Act to introduce or change a fee imposed for applications for a permit or for the issuance of a permit, a *principal authority* shall
(a) hold at least one public meeting at which any person who attends has an opportunity to make representations with respect to the matter,

(b) ensure that a minimum of 21 days notice of the public meeting is given in accordance with Clause (c), including giving 21 days notice to every person and organization that has, within five years before the day of the public meeting, requested that the *principal authority* provide the person or organization with such notice and has provided an address for the notice,

(c) ensure that the notice under Clause (b),

  (i) sets out the intention of the *principal authority* to pass the by-law, regulation or resolution under section 7 of the Act and whether the by-law, regulation or resolution would impose any fee that was not in effect on the day the notice is given or would change any fee that was in force on the day the notice is given,

  (ii) is sent by regular mail to the last address provided by the person or organization that requested the notice in accordance with Clause (b), and

  (iii) sets out the information described in Clause (d) or states that the information will be made available at no cost to any member of the public upon request, and

(d) make the following information available to the public:

  (i) an estimate of the costs of administering and enforcing the Act by the *principal authority*,

  (ii) the amount of the fee or of the change to the existing fee, and

  (iii) the rationale for imposing or changing the fee.

Part 2
Alternative Solutions, Disputes, Rulings and Interpretations

Section 2.1. Alternative Solutions
2.1.1. Documentation of Alternative Solutions 3

Section 2.2. Building Code Commission
2.2.1. Hearings 4

Section 2.3. Building Materials Evaluation Commission
2.3.1. Application Fee 5

Section 2.4. Rulings and Interpretations
2.4.1. Designated Materials Evaluation Bodies 5
2.4.2. Minister's Rulings 5
2.4.3. Interpretations By Minister 6

Part 2

Alternative Solutions, Disputes, Rulings and Interpretations

Section 2.1. Alternative Solutions

2.1.1. Documentation of Alternative Solutions

2.1.1.1. Documentation

(1) The person proposing the use of an *alternative solution* shall provide documentation to the *chief building official* or *registered code agency* that

(a) identifies applicable objectives, functional statements and acceptable solutions, and

(b) establishes on the basis of past performance, tests described in Article 2.1.1.2. or other evaluation that the proposed alternative solution will achieve the level of performance required under Article 1.2.1.1. of Division A.

(2) The documentation described in Sentence (1) shall include information about relevant assumptions, limiting or restricting factors, testing procedures, studies or *building* performance parameters, including any commissioning, operational and maintenance requirements.

2.1.1.2. Tests

(1) Where no published test method to establish the suitability of an *alternative solution* proposed under Article 2.1.1.1. exists, then the tests used for the purposes of that Article shall be designed to simulate or exceed anticipated service conditions or shall be designed to compare the performance of the material or system with a similar material or system that is known to be acceptable.

(2) The results of tests or evaluations based on test standards other than as described in this Code may be used for the purposes of Sentence (1) if the alternate test standards provide comparable results.

Section 2.2. Building Code Commission

2.2.1. Hearings

2.2.1.1. Divisions

(1) The Building Code Commission may sit in two or more divisions simultaneously so long as a quorum of each division is present.

2.2.1.2. Single Member

(1) One member of the Building Code Commission may, with the approval of the chair or vice-chair, hear and determine any dispute set out in Sentence (2) and, for that purpose, the member has all the jurisdiction and powers of the Commission.

(2) The disputes referred to in Sentence (1) are:
(a) any dispute described in clause 24(1)(a) of the Act respecting the sufficiency of compliance with technical requirements of this Code related to *sewage systems*, and
(b) any dispute described in clauses 24(1)(b) or (c) of the Act.

2.2.1.3. Time Period

(1) A hearing to decide a dispute described in Clause 2.2.1.2.(2)(b) shall be held not more than five days after the Commission receives an application for a hearing in a form approved by the Commission.

(2) The time period described in Sentence (1) commences on the day after the Commission receives the application and excludes Saturdays, holidays and all other days when the offices of the Government of Ontario are not open for the transaction of business with the public.

2.2.1.4. Eligibility

(1) No member of the Commission shall be:
(a) a member of the public service of Ontario,
(b) an employee of a *principal authority*, or
(c) a person who is registered under Article 3.4.3.2. as a *registered code agency*, an officer, director, partner or employee of a *registered code agency* or a person engaged by a *registered code agency* to perform functions under the Act on behalf of the *registered code agency*.

Section 2.3. Building Materials Evaluation Commission

2.3.1. Application Fee

2.3.1.1. Application Fee

(1) The fee on an application to the Building Materials Evaluation Commission is $950.00.

Section 2.4. Rulings and Interpretations

2.4.1. Designated Materials Evaluation Bodies

2.4.1.1. Designated Bodies

(1) The following body is designated as a materials evaluation body for the purposes of clause 29(1)(a) of the Act:

Canadian Construction Materials Centre of the National Research Council of Canada

2.4.2. Minister's Rulings

2.4.2.1. Minister's Rulings

(1) The *Minister* may impose terms and conditions, including conditions of termination, when making rulings under clause 29(1)(a) of the Act adopting the evaluation report of a materials evaluation body designated in the *building code*.

2.4.2.2. Criteria

(1) A ruling made under clause 29(1)(c) of the Act may only approve the use of an alternative material, system or *building* design in a manner

(a) that will, in the opinion of the *Minister*, achieve the level of performance that is required by this Code, and

(b) that is consistent with,

  (i) a decision of the Building Code Commission in respect of a dispute described in clause 24(1)(a) of the Act,

  (ii) an approval of the use of the material, system or *building* design in the whole of another province or territory in accordance with the law of that province or territory, or

r_1 (iii) a revision of the CCBFC, "National Building Code of Canada" or the CCBFC, "National Plumbing Code of Canada" that has been approved by the Canadian Commission on Building and Fire Codes.

2.4.3. Interpretations By Minister

2.4.3.1. Interpretations By Minister

(1) Every interpretation issued by the *Minister* under section 28.1 of the Act shall be made available to the public

(a) by posting the interpretation on the *Building Code website*, and

(b) by providing a written copy of the interpretation on receipt of a request for it.

Part 3
Qualifications

Section 3.1. Qualifications for Chief Building Officials and Inspectors

3.1.1. Scope 3
3.1.2. Chief Building Officials 4
3.1.3. Supervisors and Managers 4
3.1.4. Inspectors 5
3.1.5. Updating of Qualifications 6
3.1.6. Information 7
3.1.7. Fees 7
3.1.8. Public Register 7
3.1.9. Categories of Qualifications 8

Section 3.2. Qualifications for Designers

3.2.1. Scope 8
3.2.2. General 8
3.2.3. Definition 9
3.2.4. Qualifications - Persons Engaged in the Business of Providing Design Activities to the Public 9
3.2.5. Qualifications - Other Designers 18
3.2.6. Public Register 20
3.2.7. Classes of Registration and Categories of Qualifications 21

Section 3.4. Qualifications for Registered Code Agencies

3.4.1. Scope 21
3.4.2. Definition 21
3.4.3. Qualifications 22
3.4.4. Public Register 29
3.4.5. Classes of Registration and Categories of Qualifications 30

Section 3.5. Classes of Registration and Categories of Qualifications
3.5.1. Scope 30
3.5.2. Classes of Registration and Categories of Qualifications 30

Section 3.6. Insurance
3.6.1. Scope 35
3.6.2. Insurance for Registered Code Agencies and Persons Referred to in Subsection 15.11(5) of the Act 35

Section 3.7. Registered Code Agencies
3.7.1. Appointment of Registered Code Agency under Section 4.1 of the Act 38
3.7.2. When a Registered Code Agency may not be Appointed or Continue to Act Under an Appointment 39
3.7.3. Additional Functions that Registered Code Agencies may be Appointed to Perform 40
3.7.4. Manner in Which Registered Code Agency Shall Perform Functions 40
3.7.5. Termination of Appointment of a Registered Code Agency 46
3.7.6. Information to be Provided 46
3.7.7. Referral of Stop Work Order 48

Part 3
Qualifications

Section 3.1. Qualifications for Chief Building Officials and Inspectors

3.1.1. Scope

3.1.1.1. Scope

(1) Except as provided in Sentence (2), this Section prescribes, for the purposes of subsections 15.11(1), (2) and (3) of the Act

(a) the qualifications that a person must satisfy to be appointed and to remain appointed as
  (i) a *chief building official* under the Act, or
  (ii) an *inspector* who has the same powers and duties as a *chief building official* in relation to *plumbing*,
(b) the qualifications that a person must satisfy to be appointed and to remain appointed as
  (i) an *inspector* who has the same powers and duties as a *chief building official* in relation to *sewage systems*, or
  (ii) an *inspector* whose duties include plans review or inspection under the Act of *sewage systems*, and
(c) the qualifications that a person must satisfy to be appointed and to remain appointed as an *inspector* under the Act, other than an *inspector* described in Subclause (a)(ii) or (b)(i) or (ii).

(2) The qualification requirements for *chief building officials* and *inspectors* in Sentence (1) do not apply to plan review and inspection of

(a) site services including
  (i) surface drainage, and
  (ii) *plumbing* located underground either outside a *building* or under a *building*,
(b) *construction* of a factory-built house certified to CAN/CSA-A277, "Procedure for Certification of Factory-Built Houses",
(c) *construction* of a mobile home conforming to CAN/CSA-Z240 Series, "Mobile Homes",
(d) *construction* of a park model trailer conforming to CAN/CSA-Z241 Series, "Park Model Trailers", or
(e) signs.

3.1.2. Chief Building Officials

3.1.2.1. Qualifications

(1) The following are prescribed as qualifications for a person to be appointed and to remain appointed under the Act as a *chief building official* or as an *inspector* who has the same powers and duties as a *chief building official* in relation to *sewage systems* or *plumbing*
(a) the person shall successfully complete the examination program administered or authorized by the Ministry of Municipal Affairs and Housing relating to the person's knowledge of the Act and this Code and the powers and duties of *chief building officials*,
(b) if, under subsection 22(2) of the Act, the person will also exercise any of the powers or perform any of the duties of an *inspector*, the person shall also have the qualifications contained in Sentence 3.1.4.1.(1), and
(c) the person shall file the information set out in Sentence 3.1.6.1.(1) with the *director* in a form established by the *director*.

(2) An *inspector* who has the same powers and duties as a *chief building official* in relation to *sewage systems* and who had, on August 31, 2003, the qualification described in Article 2.11.3.1. of Ontario Regulation 403/97 (Building Code), as it read on that day
(a) shall be deemed to have successfully completed the examination program described in Clause (1)(a),
(b) shall be deemed to have successfully completed the examination program described in Clause 3.1.4.1.(1)(a) in the category of qualification described in Column 3 of Row 10 of Table 3.5.2.1., and
(c) shall be deemed to have filed with the *director* the information required in Clause (1)(c) if the person filed with the *director*, before the day this Article came into force, the information required under Article 2.11.3.1. of Ontario Regulation 403/97 (Building Code), as that Article read on August 31, 2003.

3.1.3. Supervisors and Managers

3.1.3.1. Qualifications

(1) The following are prescribed as the qualifications for a person to be appointed and to remain appointed under the Act as an *inspector* whose duties are solely the supervision or management of *inspectors*

(a) the person shall successfully complete the examination program administered or authorized by the Ministry of Municipal Affairs and Housing of the person's knowledge of the Act and this Code and the powers and duties of *chief building officials*,
(b) the person shall successfully complete the examination program administered by the Ministry of Municipal Affairs and Housing of the person's knowledge of the Act and this Code related to any one category of qualification set out in Column 3 of Table 3.5.2.1., and
(c) the person shall file the information set out in Sentence 3.1.6.1.(1) with the *director* in a form established by the *director*.

3.1.4. Inspectors

3.1.4.1. Qualifications

(1) Except as provided in Article. 3.1.4.2., the following are prescribed as qualifications for a person to be appointed and to remain appointed under the Act as an *inspector* whose duties include plans review or inspection under the Act
(a) the person shall successfully complete the examination program administered or authorized by the Ministry of Municipal Affairs and Housing relating to the person's knowledge of the Act and this Code in the category or categories of qualifications in Column 3 of Table 3.5.2.1. that correspond to the types of *buildings* set out in Column 4 of Table 3.5.2.1. in respect of which the person will exercise the powers or perform the duties of an *inspector* under the Act,
(b) the person shall file the information set out in Sentence 3.1.6.1.(1) with the *director* in a form established by the *director*.

(2) An *inspector* who had, on August 31, 2003, the qualification described in Article 2.11.3.1., of Ontario Regulation 403/97 (Building Code), as that Article read on August 31, 2003
(a) shall be deemed to have successfully completed the examination program described in Clause (1)(a) in the category of qualification described in Column 3 of Row 10 of Table 3.5.2.1., and
(b) shall be deemed to have filed with the *director* the information required in Clause (1)(b) if the person filed with the *director*, before September 1, 2003, the information required under Article 2.11.3.1. of Ontario Regulation 403/97 (Building Code), as that Article read on August 31, 2003.

3.1.4.2. Qualifications for Intern Inspectors

(1) A person appointed under the Act as an intern *inspector* whose duties include supervised plans review or inspection under the Act is exempt from the requirements in Article 3.1.4.1. if

(a) the person is enrolled in an internship program approved by the *Minister*, and

(b) the person is supervised by an *inspector* or *chief building official* who meets the category of qualification in respect of which the person will exercise the powers or perform the duties.

(2) An intern *inspector* described in Clause (1)(a) shall not issue orders under the Act except orders under subsections 12(2) or 13(1) of the Act.

(3) An intern *inspector* described in Clause (1)(a) shall not undertake a site inspection of a *building* related to a notice in respect of

(a) substantial completion of footings and *foundations* prior to commencement of backfilling, or

(b) completion of *construction* and installation of components required to permit the issuance of an occupancy permit under Sentence 1.3.3.1.(2) or to permit occupancy under Sentence 1.3.3.2.(1), if the *building* or part of the *building* to be occupied is not fully completed.

3.1.5. Updating of Qualifications

3.1.5.1. Updating of Qualifications

(1) When an examination that is part of an examination program referred to in Clause 3.1.2.1.(1)(a), 3.1.3.1.(1)(a) or (b) or 3.1.4.1.(1)(a) or (b) is replaced with a new examination, the *director* shall give notice of the new examination to every person who has, pursuant to Clause 3.1.2.1.(1)(c), 3.1.3.1(1)(c) or 3.1.4.1.(1)(c), informed the *director* that the person completed the examination before it was replaced or who is deemed to have successfully completed the examination program.

(2) The *director* may give the notice referred to in Sentence (1) by sending it by regular letter mail to the last address of the person filed with the *director*.

(3) It is a prescribed qualification for the purposes of subsections 15.11(1), (2) and (3) of the Act that, not later than 180 days after the day on which a notice referred to in Sentence (1) is sent, the person to whom the notice is given shall

(a) successfully complete all new examinations referred to in the notice, and

(b) file the information set out in Sentence 3.1.6.1.(1) with the *director* in a form established by the *director*.

3.1.6. Information

3.1.6.1. Qualifications

r₄ **(1)** The information referred to in Clauses 3.1.2.1.(1)(c), 3.1.3.1.(1)(c), 3.1.4.1.(1)(b) and 3.1.5.1.(3)(b) is the following

(a) the person's name, residence address and residential mailing address, if different from the residence address,

(b) the name and address of every *principal authority* that has appointed the person as a *chief building official* or *inspector* under the Act, and

(c) information about the examinations that the person has successfully completed, in such form and in such detail as may be required by the *director*.

(2) A person who files information under Sentence (1) with the *director* shall advise the *director* of any change of the information not later than 15 days after the change.

3.1.7. Fees

3.1.7.1. Fees

r₄ **(1)** The fee payable upon the filing of information under Clause 3.1.2.1.(1)(c), 3.1.3.1.(1)(c), 3.1.4.1.(1)(b) or 3.1.5.1.(3)(b) is $80.

(2) The amount of a fee referred to in Sentence (1) is reduced by $10 if the information is filed and the fee is paid in accordance with a means of electronic filing and payment specified by the *director*.

(3) The Ministry of Municipal Affairs and Housing may charge a fee to a person who takes an examination for the purposes of this Section.

3.1.8. Public Register

3.1.8.1. Public Register

(1) The *director* shall establish and maintain a register available to the public listing every person who has the qualifications required by subsections 15.11(1), (2) and (3) of the Act and has been appointed as a *chief building official* or *inspector* by a *principal authority*.

(2) The register referred to in Sentence (1) shall contain the following information with respect to each person listed in it

(a) the name of the person,
(b) any identifying number assigned by the *director* to that person,
(c) the name of each *principal authority* that has appointed the person as a *chief building official* or *inspector*, and
(d) the qualifications of the person.

3.1.9. Categories of Qualifications

3.1.9.1. Categories

(1) Table 3.5.2.1. contains the categories of qualifications for the purposes of this Section.

Section 3.2. Qualifications for Designers

3.2.1. Scope

3.2.1.1. Scope

(1) This Section prescribes, for the purposes of clause 8(2)(c) and subsection 15.11(5) of the Act, the qualifications for a person who carries out *design activities* after December 31, 2005.

3.2.2. General

3.2.2.1. Persons Engaged in the Business of Providing Design Activities to the Public

(1) Every person engaged in the business of providing *design activities* to the public, other than a person who is the holder of a Certificate of Practice or a Temporary Licence issued under the *Architects Act*, must have the qualification set out in Sentence 3.2.4.1.(1).

3.2.2.2. Other Designers

e_3 **(1)** Every person who carries out *design activities*, other than an *architect*, must have the qualifications set out in Sentence 3.2.5.1.(1) if the person is not required to have the qualification set out in Sentence 3.2.4.1.(1). (See Appendix A.)

3.2.3. Definition

3.2.3.1. Definition

(1) In this Section,

registered means registered under Article 3.2.4.2.

3.2.4. Qualifications - Persons Engaged in the Business of Providing Design Activities to the Public

3.2.4.1. General

(1) Except as provided in Sentences (3) and (4), every person engaged in the business of providing *design activities* to the public must have the following qualification

(a) the person must be *registered* with the *director*.

(2) A registration shall be in a form established by the *director*.

(3) A person is exempt from the requirement to comply with the qualification in Sentence (1) if the person's *design activities* relate only to

(a) *construction* of a home as defined under the *Ontario New Home Warranties Plan Act* that will be constructed or sold by that person, if the person is a builder or vendor as defined in that Act and is registered under that Act,

(b) *construction* of a *building* that is owned by that person,

(c) *construction* of a *farm building* that is,

  (i) of *low human occupancy*,

  (ii) of 2 *storeys* or less in *building height*, and

  (iii) has a *building area* of less than 600 m^2,

(d) the extension, material alteration or repair of a detached house, semi-detached house, townhouse or row house containing not more than two *dwelling units* in each house.

(e) a *sewage system* to be constructed by that person if the person is *registered* under Article 3.3.3.2.,
(f) *construction* of tents described in Sentence 3.14.1.2.(2) in Division B,
(g) *construction* of signs,
(h) *construction* of site services, including
    (i) surface drainage, and
    (ii) *plumbing* located underground, either outside a *building* or under a *building*,
(i) *construction* of a factory-built house certified to CAN/CSA-A277, "Procedure for Certification of Factory-Built Houses",
(j) *construction* of a mobile home conforming to CAN/CSA-Z240 Series, "Mobile Homes",
(k) *construction* of a park model trailer conforming to CAN/CSA-Z241 Series, "Park Model Trailers",
(l) *construction* of pre-engineered elements of a *building* if the design of the elements is carried out by a person competent in the specific discipline appropriate to the circumstances,
(m) *construction* of appliances, equipment and similar incidental components of a *building*, or
(n) *construction* of a *building* for which a permit under section 8 of the Act is applied for or issued before January 1, 2006 and for which *construction* is commenced within six months after the permit is issued.

(4) A person is exempt from the requirements to comply with the qualification in Sentence (1) if the person's *design activities* are with respect to a detached house, semi-detached house, townhouse or row house containing not more than two *dwelling units* in each house and the *design activities* relate only to
(a) a *plumbing* system,
(b) a heating, ventilation and *air conditioning* system, or
(c) ancillary *buildings* such as garages.

3.2.4.2. Registration and Renewal of a Registration

(1) Subject to Article 3.2.4.9., the *director* may register an applicant, or renew a registration, in each class of registration applied for, if
(a) the applicant or *registered* person or, if the applicant or *registered* person is a corporation or partnership, a director, officer, partner or employee of the applicant or *registered* person, has successfully completed the examination program administered or authorized by the Ministry of Municipal Affairs and Housing relating to the person's knowledge of the Act and this Code in the category of

qualification set out on Column 3 of Table 3.5.2.1. that corresponds to each class of registration set out in Column 2 of Table 3.5.2.1. for which application is made,

(b) all persons who will review and take responsibility for *design activities* provided to the public by the applicant or *registered* person for the purposes of Clause 3.2.4.7.(1)(d) have successfully completed the examination program administered or authorized by the Ministry of Municipal Affairs and Housing relating to the person's knowledge of the Act and this Code in the category of qualification set out on Column 3 of Table 3.5.2.1. that correspond to each class of registration set out in Column 2 of Table 3.5.2.1. for which application is made,

(c) the applicant or *registered* person is covered by the insurance required under Subsection 3.6.2. during the term of the registration applied for,

(d) the application is complete, and

(e) all fees required under Article 3.2.4.5. are paid.

3.2.4.3. Application for Registration or Renewal of a Registration

(1) An application for registration or renewal of a registration shall be made to the *director* in a form established by the *director*.

(2) An application for renewal of a registration shall be made at least 60 days before the expiry of the registration to be renewed.

(3) An application for registration or renewal of a registration shall include an undertaking by the applicant or *registered* person to comply with the conditions set out in Article 3.2.4.7.

(4) If a partnership or a corporation is the applicant for registration or renewal of registration, the application shall set out the names and residence addresses of all of its partners, directors or officers, as the case may be.

(5) An application for registration or renewal of a registration shall contain the names of all partners, directors, officers or employees of the applicant or *registered* person, as the case may be, and all other persons engaged by the applicant or *registered* person who

(a) have the qualifications set out in Clause 3.2.4.2.(1)(a) in the class or classes of registration for which the application is made, and

(b) have the qualifications set out in Clause 3.2.4.2.(1)(b) and will review and take responsibility for the *design activities* provided to the public by the applicant or *registered* person in the class or classes of registration for which the application is made.

(6) An application for registration or renewal of a registration shall contain evidence, provided by the applicant or *registered* person, that the persons referred to in Sentence (5) meet the qualifications set out in Clauses 3.2.4.2.(1)(a) and (b).

(7) An application for registration or renewal of a registration shall contain evidence, provided by the applicant or *registered* person, that the applicant or *registered* person is covered by the insurance required under Subsection 3.6.2. during the term of the registration applied for.

3.2.4.4. Term

(1) A registration expires one year after it is issued but the *director* may, for the purposes of staggering the renewal dates of the registrations, issue the initial registration for a term of not less than 90 days and not more than 18 months.

3.2.4.5. Fees

(1) The fee for a registration is $125.

(2) The fee for a *registered* person to add a new class of registration is $25.

(3) The fee for renewal of a registration is $80.

(4) The amount of a fee referred to in Sentence (1), (2) or (3) is reduced by 15 per cent and rounded to the nearest whole dollar if the application is made and the fee is paid in accordance with a means of electronic filing and payment specified by the *director*.

(5) The Ministry of Municipal Affairs and Housing may charge a fee to a person who takes an examination for the purposes of this Subsection.

3.2.4.6. Not Transferable

(1) A registration is not transferable.

3.2.4.7. Conditions

(1) The following are the conditions of a registration

(a) the *registered* person shall carry out *design activities* only in respect of the type of *building* described in Column 4 of Table 3.5.2.1. that correspond to the class or classes of registration held by the *registered* person,

(b) if the *registered* person is a corporation or partnership, there must throughout the term of the registration be an officer, director, partner or employee of the *registered* person who has the qualifications set out in Clause 3.2.4.2.(1)(a) for each class of registration set out in Column 2 of Table 3.5.2.1. that is held by the *registered* person,

(c) not more than 180 days after the day a notice is given under Sentence 3.2.4.8.(1) by the *director* to the *registered* person, the *registered* person shall,

  (i) ensure that the *registered* person and the persons described in Clause (b) have successfully completed all new examinations referred to in the notice, and

  (ii) provide the following information to the *director*:

    (A) the names of all persons described in Subclause (i), and

    (B) information about the examinations that the persons described in Subclause (i) have successfully completed, in such form and in such detail as may be required by the *director*,

(d) the *registered* person shall ensure that a person described in Clause (b) or another person who has the qualifications set out in Clause 3.2.4.2.(1)(b) in respect of the class of registration set out in Column 2 of Table. 3.5.2.1. to which the *design activities* relate will review and take responsibility for *design activities* in each class of registration that are provided to the public by the *registered* person,

(e) not more than 180 days after the day when a notice is given under Sentence 3.2.4.8.(1) by the *director* to the *registered* person, the *registered* person shall,

  (i) ensure that persons described in Clause (d) who will review and take responsibility for *design activities* provided to the public by the *registered* person in the class of registration to which the notice relates, have successfully completed all new examinations referred to in the notice, and

(ii) provide the following information to the *director*:
  (A) the names of all persons described in Subclause (i), and
  (B) information about the examinations that the persons referred to in Subclause (i) have successfully completed, in such form and in such detail as may be required by the *director*,

(f) the *registered* person shall ensure that a person described in Clause (d) who reviews and takes responsibility for *design activities* provided to the public by the *registered* person shall include the following information on any document submitted to a *chief building official* or *registered code agency* in the circumstances set out in subsection 15.11 (5) of the Act:
  (i) the name of the *registered* person and any registration number issued to the *registered* person by the *director*,
  (ii) a statement that the person has reviewed and taken responsibility for the *design activities*,
  (iii) the person's name and any identifying number issued to the person by the *director* in respect of the qualifications described in Clause 3.2.4.2.(1)(b), and
  (iv) the person's signature,

(g) the *registered* person shall, during the term of the registration, be covered by the insurance required under Subsection 3.6.2.,

(h) the *registered* person shall, within 15 days after the event, notify the *director* in writing of,
  (i) any change in address of the *registered* person for correspondence relating to the registration, and
  (ii) any change in the information set out in Sentences 3.2.4.3.(4) and (5),

(i) the *registered* person shall give prompt written notice to the *director* of any material change in any of the information, other than the information referred to in Clause (h), that is contained in or accompanies an application for registration or renewal of a registration,

(j) the *registered* person shall, from time to time, at the *registered* person's expense, give the *director* such documents or information relating to the registration or to activities carried out under the registration as the *director* may reasonably require,

(k) the *registered* person shall allow the representatives of the *director* access to the *registered* person's books and records during normal business hours for the purpose of confirming matters related to the registration.

3.2.4.8. Updating of Qualifications

(1) Where an examination referred to in Clause 3.2.4.2.(1)(a) or (b) is replaced with a new examination, the *director* shall give notice of the new examination to every *registered* person who is registered in a class of registration to which the new examination relates.

(2) The *director* may give the notice referred to in Sentence (1) by sending it by regular letter mail to the last address of the *registered* person that has been provided to the *director*.

3.2.4.9. Suspension, Revocation, Refusal to Register or Renew a Registration

(1) The *director* may, in the circumstances set out in Sentence (2)
(a) refuse to *register* an applicant or to renew a registration, or
(b) suspend or revoke a registration.

(2) The circumstances referred to in Sentence (1) are
(a) the *registered* person is in contravention of the Act or this Code,
(b) the *registered* person is in breach of a condition of the registration other than the condition set out in Clause 3.2.4.7.(1)(g),
(c) the registration was issued on the basis of mistaken, false or incorrect information,
(d) the *director* is of the opinion that the past conduct of the applicant or *registered* person or, if the applicant or *registered* person is a partnership or a corporation, the partners, officers or directors of the *registered* person, as the case may be, affords reasonable grounds for belief that the business that would be or is authorized by the registration will not be carried on in accordance with law,
(e) the application is incomplete, or
(f) any fees required under Article 3.2.4.5. remain unpaid.

(3) If the *director* proposes to refuse to register or renew a registration or proposes to suspend or revoke a registration under Sentence (1), the *director* shall serve a notice of the proposal, together with the reasons for it, on the applicant or *registered* person.

(4) A notice under Sentence (3) shall state that the applicant or *registered* person is entitled to a hearing before the *Tribunal* if the applicant or *registered* person, within 15 days after service of the notice referred to in Sentence (3), serves the *director* and the *Tribunal* with notice in writing requesting a hearing.

(5) If the applicant or *registered* person does not request a hearing by the *Tribunal* in accordance with Sentence (4), the *director* may carry out the proposal stated in the notice under Sentence (3).

(6) If the applicant or *registered* person requests a hearing before the *Tribunal* in accordance with Sentence (4), the *Tribunal* shall appoint a time for and hold a hearing and may by order direct the *director* to carry out the *director's* proposal or refrain from carrying it out and to take such other action as the *Tribunal* considers the *director* ought to take in accordance with the Act and this Code, and for those purposes the *Tribunal* may substitute its opinion for that of the *director*.

(7) The *director*, the applicant or *registered* person who requested the hearing, and such other persons as the *Tribunal* may specify, are parties to proceedings before the *Tribunal*.

(8) Sentences (3) to (7) do not apply and the *director* may cancel the registration of a *registered* person upon receipt of a request in writing for cancellation from the *registered* person in a form established by the *director*.

(9) If, within the time period set out in Sentence 3.2.4.3.(2), *registered* person has applied for renewal of a registration, paid the fee required under Article 3.2.4.5. and provided evidence satisfactory to the *director* that the *registered* person is covered by insurance required under Subsection 3.6.2. for the term of the renewal of the registration, the registration shall be deemed to continue until the earliest of
(a) the day the registration is renewed,
(b) if the *registered* person is served with notice that the *director* proposes to refuse to renew the registration, the day the time for giving notice requesting a hearing expires or, if a hearing is held, the day the *Tribunal* makes its order, and
(c) the day when the *registered* person ceases to be covered by the insurance required under Subsection 3.6.2.

3.2.4.10. Mandatory Suspension or Revocation of Registration or Refusal to Register or Renew Registration

(1) The *director* shall, in the circumstances set out in Sentence (2)
(a) refuse to register an applicant,
(b) refuse to renew a registration, or
(c) suspend or revoke a registration.

(2) The circumstances referred to in Sentence (1) are that
(a) the applicant or *registered* person is not covered by the insurance required under Subsection 3.6.2., or
(b) an order under subsection 69(2) of the *Provincial Offences Act* is in effect directing that the registration of the person be suspended and no registration be issued to the person until a fine is paid.

(3) If the *director* refuses to register an applicant, refuses to renew a registration or suspends or revokes a registration under Sentence (1), the *director* shall serve a notice of the refusal, suspension or revocation, together with the reasons for it, on the *registered* person.

(4) A suspension or revocation of a registration under Sentence (1) takes effect immediately and the commencement of a proceeding before the *Tribunal* does not stay the operation of the suspension or revocation of the registration.

(5) A notice under Sentence (3) shall state that the *registered* person is entitled to a hearing before the *Tribunal* if the *registered* person, within 15 days after service of the notice referred to in Sentence (3), serves the *director* and the *Tribunal* with notice in writing requesting a hearing.

(6) The *Tribunal* may, on the application of the *registered* person, stay the operation of a decision of the *director* to suspend or revoke the registration and may grant the stay subject to conditions.

(7) If a *registered* person requests a hearing before the *Tribunal* in accordance with Sentence (5), the *Tribunal* shall appoint a time for and hold a hearing and may by order confirm, alter or revoke the decision of the *director* to refuse to register or to suspend or revoke the registration, as the case may be, and may take such action as the *Tribunal* considers the *director* ought to take in accordance with the Act and this Code, and for those purposes the *Tribunal* may substitute its opinion for that of the *director*.

(8) The *director* and the *registered* person who requested the hearing, and such other persons as the *Tribunal* may specify, are parties to proceedings before the *Tribunal*.

3.2.5. Qualifications - Other Designers

3.2.5.1. General

(1) Except as provided in Sentence (2), a person who carries out *design activities* but is not required under Sentence 3.2.4.1.(1) to be *registered* with the *director* must have the following qualifications

(a) he or she shall successfully complete the examination program administered or authorized by the Ministry of Municipal Affairs and Housing relating to his or her knowledge of the Act and this Code in the category of qualification set out in Column 3 of Table 3.5.2.1. that corresponds to the type of *buildings* described in Column 4 of Table 3.5.2.1. for which the person carries out *design activities*,

(b) he or she shall file the information set out in Sentence 3.2.5.3.(1) with the *director* in a form established by the *director*, and

(c) he or she shall include the following information on any document respecting *design activities* that the person has reviewed and taken responsibility for and that is submitted to a *chief building official* or *registered code agency* in the circumstances set out in subsection 15.11(5) of the Act:

  (i) the person's name and any identifying number issued to the person issued by the *director* in respect of the qualifications described in Clause (a),

  (ii) a statement that the person has reviewed and taken responsibility for the *design activities*, and

  (iii) the person's signature.

(2) A person is exempt from the requirement to comply with the qualifications in Sentence (1) if his or her *design activities* relate only to

(a) *design activities* in respect of which a person described in Clause 3.2.4.7.(1)(d) or who has the qualifications required under Sentence (1) will review and take responsibility,

(b) *construction* of:

  (i) a detached house, semi-detached house, townhouse or row house owned by the person and containing not more than two *dwelling units* in each house, or

  (ii) an ancillary *building* that serves a *building* described in Subclause (i),

(c) *construction* of a *farm building* that

  (i) is of *low human occupancy*,

  (ii) is 2 *storeys* or less in *building height*, and

  (iii) has a *building area* of less than 600 m^2,

(d) a *sewage system* to be *constructed* by that person and:
    (i) the person is *registered* under Article 3.3.3.2., or
    (ii) the *sewage system* is owned by the person,
(e) *construction* of tents described in Sentence 3.14.1.2.(2) in Division B,
(f) *construction* of signs,
(g) *construction* of site services including
    (i) surface drainage, and
    (ii) *plumbing* located underground either outside a *building* or under a *building*,
(h) *construction* of pre-engineered elements of a *building* provided that the design of the elements is carried out by a person competent in the specific discipline appropriate to the circumstances,
(i) *construction* of appiiances, equipment and similar incidental components of a *building*,
(j) *construction* of an ancillary *building*
    (i) that serves a detached house, semi-detached house, townhouse or row house if the house contains not more than two *dwelling units*, and
    (ii) that does not exceed 50 m^2 *building area*, or
(k) *construction* of a *building* for which a permit under section 8 of the Act is applied for or issued before January 1, 2006 and for which *construction* commences within six months after the permit is issued.

3.2.5.2. Updating of Qualifications

(1) When an examination that is part of an examination program referred to in Clause 3.2.5.1.(1)(a) is replaced with a new examination, the *director* shall give notice of the new examination to every person who has, pursuant to Clause 3.2.5.1.(1)(b), informed the *director* that he or she has completed the examination before its replacement.

(2) The *director* may give the notice referred to in Sentence (1) by sending it by regular letter mail to the last address of the person that has been filed with the *director*.

(3) It is a prescribed qualification for the purposes of clause 8(2)(c) and subsection 15.11(5) of the Act that, not more than 180 days after the day on which the notice referred to in Sentence (1) is given, the person to whom the notice is given shall
(a) successfully complete all new examinations referred to in the notice, and
(b) file the information set out in Sentence 3.2.5.3.(1) with the *director* in a form established by the *director*.

3.2.5.3. Information

(1) The information referred to in Clauses 3.2.5.1.(1)(b) and 3.2.5.2.(3)(b) is the following
(a) the person's name, residence address and residential mailing address, if different from the residence address, and
(b) information about the examinations that the person has successfully completed, in such detail as may be required by the *director*.

(2) A person who has filed information under Sentence (1) with the *director* shall advise the *director* of any change of address within 15 days of the change.

3.2.5.4. Fees

(1) The fee payable upon the filing of information referred to in Clauses 3.2.5.1.(1)(b) or 3.2.5.2.(3)(b) is $80.

(2) The amount of a fee referred to in Sentence (1) is reduced by $10 if the information is filed and the fee is paid in accordance with a means of electronic filing and payment specified by the *director*.

(3) The Ministry of Municipal Affairs and Housing may charge a fee to a person who takes an examination for the purposes of this Section.

3.2.6. Public Register

3.2.6.1. Public Register

(1) The *director* shall establish and maintain a register available to the public that lists every person who has the qualifications required by clause 8(2)(c) and subsection 15.11(5) of the Act.

(2) The register referred to in Sentence (1) shall contain the following information in respect of every *registered* person
(a) the name of the *registered* person,
(b) any identifying number assigned by the *director* to the *registered* person,
(c) the business address of the *registered* person,
(d) classes of registration of the *registered* person,
(e) the names of the person or persons who will review and take responsibility for *design activities* carried out by the *registered* person in each class of registration, and

(f) any identifying number assigned by the *director* to the person or persons referred to in Clause (e).

(3) The register referred to in Sentence (1) shall contain the following information in respect of persons who have the qualifications referred to in Sentence 3.2.5.1.(1)

(a) the name of the person,
(b) any identifying number assigned by the *director* to the person,
(c) the qualifications of that person.

3.2.7. Classes of Registration and Categories of Qualifications

3.2.7.1. Classes and Categories

(1) Table 3.5.2.1. contains the classes of registration and categories of qualifications for the purposes of this Section.

Section 3.4. Qualifications for Registered Code Agencies

3.4.1. Scope

3.4.1.1. Scope

(1) This Section prescribes, for the purposes subsection 15.11(4) of the Act, the qualifications that a person must meet in order to be eligible to be appointed after June 30, 2005 as a *registered code agency* under the Act.

3.4.2. Definition

3.4.2.1. Definition

(1) In this Section,

registered means registered under Article 3.4.3.2.

3.4.3. Qualifications

3.4.3.1. General

(1) The following are prescribed as qualifications for persons to be appointed under the Act as a *registered code agency*
(a) the person must be *registered* with the *director*.

(2) A registration shall be in a form established by the *director*.

3.4.3.2. Registration and Renewal of a Registration

(1) Subject to Article 3.4.3.9., the *director* may register an applicant, or renew a *registered* person's registration, in each class of registration applied for if
(a) the applicant or *registered* person or, if the applicant or *registered* person is a corporation or partnership, a director, officer, partner or employee of the applicant or *registered* person, has successfully completed the examination program administered or authorized by the Ministry of Municipal Affairs and Housing relating to the person's knowledge of the Act and this Code and the powers and duties of a *registered code agency*,
(b) the applicant or *registered* person or, if the applicant or *registered* person is a corporation or partnership, one or more directors, officers, partners or employees of the applicant or *registered* person, have successfully completed the examination program administered or authorized by the Ministry of Municipal Affairs and Housing relating to the person's knowledge of the Act and this Code in the category of qualification set out in Column 2 of Table 3.5.2.2. that corresponds to each class of registration set out in Column 1 of Table 3.5.2.2. for which application is made,
(c) all persons who will carry out plans review and inspection activities on behalf of the *registered code agency* have the qualifications set out in Clause (b) in respect of each class of registration for which application is made,
(d) the applicant or *registered* person has in place a quality management plan referred to in Sentence 3.4.3.3.(3) for carrying out the activities of the applicant or *registered* person under the registration that is acceptable to the *director*,
(e) the applicant or *registered* person is covered by the insurance required under Subsection 3.6.2. during the term of the registration applied for,

(f) the application is complete, and
(g) all fees required under Article 3.4.3.5. are paid.

3.4.3.3. Application for Registration or Renewal of a Registration

(1) An application for registration or renewal of a registration shall be made to the *director* in a form established by the *director*.

(2) An application for renewal of a registration shall be made at least 60 days before the expiry of the registration being renewed.

(3) An application for registration or renewal of a registration shall include a quality management plan for carrying out the activities of the applicant or *registered* person under the registration, including, without limitation

(a) procedures relating to the commencement of activities as a *registered code agency*, including procedures to verify that the applicant or *registered* person is qualified to undertake the activities and to verify that there exists no conflict of interest within the meaning of Sentence 3.7.3.1.(4),
(b) identification of the responsibilities of persons who will carry out plans review and inspection activities of the applicant or *registered* person and procedures for the supervision of those persons,
(c) procedures for assessing plans and specifications for conformity with this Code, including procedures for the assessment of *alternative solutions*,
(d) procedures for inspecting the *construction* of *buildings*,
(e) procedures for receipt of notices that *construction* is ready for inspection and of written reports from *architects* and *professional engineers* arising out of the general review of the *construction* of *buildings*,
r4 (f) procedures for the issuance of certificates and orders under the Act, including the responsibility of the persons with the qualifications set out in Sentences 3.7.4.3.(1) and (2),
(g) procedures for referral of matters to a *chief building official* under subsection 14(5) of the Act,
(h) procedures for participation of the applicant or *registered* person in proceedings before the Building Code Commission under section 24 of the Act and before the Superior Court of Justice under section 25 of the Act,

(i) procedures for documenting the activities of the applicant or *registered* person under the registration, including data control, records retention and the maintenance of security and confidentiality of records, and transferring records to the *principal authority*,
(j) procedures for training and supervision of personnel, and
(k) procedures for the review and up-dating of the quality management plan.

(4) An application for registration or renewal of a registration shall include an undertaking by the applicant or *registered* person to comply with the conditions set out in Article 3.4.3.7.

(5) If a partnership or a corporation is the applicant for registration or renewal of a registration, an application for registration or renewal of a registration shall set out the names and residence addresses of all its partners, directors or officers, as the case may be.

(6) An application for registration or renewal of a registration shall contain the names of all partners, directors, officers or employees of the applicant or *registered* person, as the case may be, and all other persons who have been engaged by the applicant or *registered* person, who
(a) have the qualifications set out in Clauses 3.4.3.2.(1)(a) and (b), and
(b) have the qualifications set out in Clauses 3.4.3.2.(1)(b) and (c) and will exercise powers and perform functions under the Act on behalf of the applicant or *registered* person.

(7) An application for registration or renewal of a registration shall contain evidence, provided by the applicant or *registered person*, that the persons referred to in Sentence (6) meet the qualifications set out in Clauses 3.4.3.2.(1)(a) to (c).

(8) An application for registration or renewal of a registration shall contain evidence, provided by the applicant or *registered* person, that the applicant or *registered* person is covered by the insurance required under Subsection 3.6.2. during the term of the registration applied for.

3.4.3.4. Term

(1) A registration expires one year after the date of its issuance.

3.4.3.5. Fees

(1) The fee for registration is $300.

(2) The fee for the addition of a new class of registration is $50.

(3) The fee for renewal of a registration is $220.

(4) The amount of a fee referred to in Sentence (1), (2) or (3) is reduced by 15 per cent and rounded to the nearest whole dollar if the application is made and the fee is paid in accordance with a means of electronic filing and payment specified by the *director*.

(5) The Ministry of Municipal Affairs and Housing may charge a fee to a person who takes an examination for the purposes of this Section.

3.4.3.6. Not Transferable

(1) A registration is not transferable.

3.4.3.7. Conditions

(1) The following are the conditions of a registration
(a) the *registered* person shall carry out activities under the registration in accordance with the Act, this Code and the quality management plan referred to in Clause 3.4.3.2.(1)(d),
(b) if the *registered* person is a corporation or partnership, during the term of the registration there must be
  (i) an officer, director, partner or employee of the *registered* person who has the qualifications set out in Clause 3.4.3.2.(1)(a), and
  (ii) one or more officers, directors, partners or employees of the *registered* person who have the qualifications set out in Clause 3.4.3.2.(1)(b) in respect of each class of registration that is held by the *registered* person,
(c) not more than 180 days after the day a notice is given under Sentence 3.4.3.8.(1) by the *director* to the *registered* person, the *registered* person shall:
  (i) ensure that the persons referred to in Clause (1)(b) have successfully completed the new examinations referred to in the notice, and
  (ii) provide to the *director* the names of the persons and information about the examinations that the persons have successfully completed, in such detail as may be required by the *director*,

(d) the *registered* person shall during the term of the registration, be covered by the insurance required by Subsection 3.6.2.,

(e) the *registered* person shall, within 15 days after the event, notify the *director* in writing
   (i) of any change in address of the *registered* person for correspondence relating to the registration, and
   (ii) of any change in the information set out in Sentences 3.4.3.3.(5) and (6),

(f) the *registered* person shall give prompt written notice to the *director* of any material change in any of the information, other than the information referred to in Clause (e) that is contained in or accompanies an application for registration or renewal of a registration,

(g) the *registered* person shall, from time to time, at the *registered* person's expense, give to the *director* such documents or information relating to the registration of the *registered* person or to activities carried out under the registration as the *director* may reasonably require,

(h) the *registered* person shall allow the representatives of the *director* access to the *registered* person's books and records during normal business hours for the purpose of confirming matters related to the registration.

3.4.3.8. Updating of Qualifications

(1) Where an examination in an examination program referred to in Clause 3.4.3.2.(1)(a), (b) or (c) is replaced with a new examination, the *director* shall give notice of the new examination to every *registered* person who is registered in a class of registration set out in Column 1 of Table 3.5.2.2. to which the examination relates.

(2) The *director* may give the notice referred to in Sentence (1) by sending it by regular letter mail to the last address of the *registered* person that has been provided to the *director*.

3.4.3.9. Suspension, Revocation, Refusal to Register or Renew a Registration

(1) The *director* may, in the circumstances set out in Sentence (2)
(a) refuse to register an applicant,
(b) refuse to renew a registration, or
(c) suspend or revoke a registration.

(2) The circumstances referred to in Sentence (1) are
(a) the *registered* person is in contravention of the Act or this Code,
(b) the *registered* person is in breach of a condition of the registration other than the condition set out in Clause 3.4.3.7.(1)(d),
(c) the registration was issued on the basis of mistaken, false or incorrect information,
(d) the *director* is of the opinion that the past conduct of the applicant or *registered* person or, if the applicant or *registered* person is a partnership or a corporation, the partners, officers or directors of the *registered* person, as the case may be, affords reasonable grounds for belief that the business that would be or is authorized by the registration will not be carried on in accordance with law,
(e) the *director* is of the opinion that there are reasonable grounds for belief that the activities of the applicant or *registered* person are or will be carried on in a manner that poses a threat to public safety,
(f) the application is incomplete, or
(g) any fees required under Article 3.4.3.5. remain unpaid.

(3) If the *director* proposes to refuse to register or renew a registration or proposes to suspend or revoke a registration under Sentence (1), the *director* shall serve a notice of the proposal, together with the reasons for it, on the applicant or *registered* person.

(4) A notice under Sentence (3) shall state that the applicant or *registered* person is entitled to a hearing before the *Tribunal* if the applicant or *registered* person, within 15 days after service of the notice referred to in Sentence (3), serves the *director* and the *Tribunal* with notice in writing requesting a hearing.

(5) If an applicant or *registered* person does not request a hearing by the *Tribunal* in accordance with Sentence (4), the *director* may carry out the proposal stated in the notice under Sentence (3).

(6) If an applicant or *registered* person requests a hearing before the *Tribunal* in accordance with Sentence (4), the *Tribunal* shall appoint a time for and hold a hearing and may by order direct the *director* to carry out the *director's* proposal or refrain from carrying it out and to take such other action as the *Tribunal* considers the *director* ought to take in accordance with the Act and this Code, and for those purposes the *Tribunal* may substitute its opinion for that of the *director*.

(7) The *director*, the applicant or *registered* person who requested the hearing, and such other persons as the *Tribunal* may specify, are parties to proceedings before the *Tribunal*.

(8) A proposal to suspend or revoke a registration by reason of Clause (2)(e) takes effect immediately and the commencement of a proceeding before the *Tribunal* does not stay the operation of the proposal to suspend or revoke the registration.

(9) The *Tribunal* may, on the application of the *registered* person, stay the operation of the proposal of the *director* to suspend or revoke the registration, and may grant the stay subject to conditions.

(10) Sentences (3) to (9) do not apply and the *director* may cancel the registration of a *registered* person upon receipt of a request in writing for cancellation from the *registered* person in a form established by the *director*.

(11) Subject to Sentence (8), if within the time period set out in Sentence 3.4.3.3.(2) a *registered* person has applied for renewal of a registration, paid the fee required under Article 3.4.3.5. and provided evidence satisfactory to the *director* that the *registered* person is covered by insurance required under Subsection 3.6.2. for the term of the renewal of the registration, the registration shall be deemed to continue until the earliest of

(a) the day the registration is renewed,
(b) if the *registered* person is served with notice that the *director* proposes to refuse to renew the registration, the day the time for giving notice requesting a hearing expires or, if a hearing is held, the day the *Tribunal* makes its order, and
(c) the day when the *registered* person ceases to be covered by the insurance required under Subsection 3.6.2.

3.4.3.10. Mandatory Suspension or Revocation of Registration or Refusal to Register or Renew a Registration

(1) The *director* shall, in the circumstances set out in Sentence (2)
(a) refuse to register an applicant,
(b) refuse to renew a registration, or
(c) suspend or revoke a registration.

(2) The circumstances referred to in Sentence (1) are
(a) the *registered* person is not covered by the insurance required under Subsection 3.6.2., or

(b) an order under subsection 69(2) of the *Provincial Offences Act* is in effect directing that the registration of the person be suspended and that no registration be issued to that person until a fine is paid.

(3) If the *director* refuses to register an applicant, refuses to renew a registration or suspends or revokes a registration under Sentence (1), the *director* shall serve a notice of the refusal, suspension or revocation, together with the reasons for it, on the *registered* person.

(4) A suspension or revocation of a registration under Sentence (1) takes effect immediately and the commencement of a proceeding before the *Tribunal* does not stay the operation of the suspension or revocation of the registration.

(5) The *Tribunal* may, on the application of the *registered* person, stay the operation of a decision of the *director* to suspend or revoke the registration, and may make the stay subject to conditions.

(6) A notice under Sentence (3) shall state that the *registered* person is entitled to a hearing before the *Tribunal* if the *registered* person, within 15 days after service of the notice referred to in Sentence (3), serves the *director* and the *Tribunal* with notice in writing requesting a hearing.

(7) If a *registered* person requests a hearing before the *Tribunal* in accordance with Sentence (6), the *Tribunal* shall appoint a time for and hold a hearing and may by order confirm, alter or revoke the decision of the *director* to refuse to register or to suspend or revoke the registration and may take such action as the *Tribunal* considers the *director* ought to take in accordance with the Act and this Code, and for such purposes the *Tribunal* may substitute its opinion for that of the *director*.

(8) The *director* and the *registered* person who requested the hearing, and such other persons as the *Tribunal* may specify, are parties to proceedings before the *Tribunal*.

3.4.4. Public Register

3.4.4.1. Public Register

(1) The *director* shall establish and maintain a register available to the public listing every person who has the qualifications required by subsection 15.11(4) of the Act.

(2) The register referred to in Sentence (1) shall contain the following information in respect of every *registered* person

(a) the name of the *registered* person,
(b) any identifying number assigned by the *director* to the *registered* person,
(c) the business address of the *registered* person,
(d) the classes of registration of the *registered* person, and
(e) the names of any persons who will exercise powers and perform functions under the Act on behalf of the *registered* person in each class of registration and any identifying number assigned by the *director* to that person.

3.4.5. Classes of Registration and Categories of Qualifications

3.4.5.1. Classes and Categories

(1) Table 3.5.2.2. contains the classes of registration and categories of qualifications for the purposes of this Section.

Section 3.5. Classes of Registration and Categories of Qualifications

3.5.1. Scope

3.5.1.1. Scope

(1) This Section sets out classes of registration and categories of qualifications for the purposes of Sections 3.1, 3.2., 3.4. and 3.7.

3.5.2. Classes of Registration and Categories of Qualifications

3.5.2.1. Inspectors and Persons Who Carry out Design Activities

(1) Table 3.5.2.1. sets out the classes of registration and categories of qualifications for persons who carry out *design activities* and the categories of qualifications for *inspectors*.

Table 3.5.2.1.
Classes of Registration and Categories of Qualifications For Inspectors and Persons Who Carry Out Design Activities

Forming Part of Sentence 3.5.2.1.(1)

Row Number	Classes of Registration for Persons Engaged in the Business of Providing *Design Activities* to the Public	Categories of Qualifications for *Inspectors* and Persons Described in Clauses 3.2.4.2.(1)(a) and (b) and 3.2.5.1.(1)(a)	Type of *Building*
1	House	House	(a) A detached house, semi-detached house, townhouse or row house containing not more than two *dwelling units* in each house and the *building* systems, works, fixtures and service systems appurtenant to these *buildings*. including: (b) an ancillary *building* that serves the *building*, and excluding: (c) *buildings* and parts of *buildings* described in Column 4 of any of Rows 5, 6, 7, 8, 10 and 11 of this Table.
2	Small *Buildings*	Small *Buildings*	(a) *Buildings* described in Sentence 1.1.2.4.(1) of Division A and the *building* systems, works, fixtures and service systems appurtenant to these *buildings*. including: (b) *buildings* and parts of *buildings* (i) described in Column 4 of Row 1 of this Table, or (ii) to which any of Sections 3.10., 3.11., 3.12., 3.14., and 3.15. of Division B apply and that are appurtenant to or serve *buildings* described in Clause (a). excluding: (c) *buildings* and parts of *buildings* described in Column 4 of any of Rows 4 to 10 of this Table.
3	Large *Buildings*	Large *Buildings*	(a) *Buildings* described in Sentence 1.1.2.2.(1), (3) or (4) of Division A and the *building* systems, works, fixtures and service systems appurtenant to these *buildings*. excluding: (b) *buildings* and parts of *buildings* described in Column 4 of any of Rows 4 to 11 of this Table.
4	Complex *Buildings*	Complex *Buildings*	*Building* systems, works, fixtures and service systems to which Subsection 3.2.6. of Division B or any provision in Articles 3.2.8.3. to 3.2.8.11. of Division B apply.
Column 1	2	3	4

Table 3.5.2.1. (Cont'd)
Classes of Registration and Categories of Qualifications For Inspectors and Persons Who Carry Out Design Activities
Forming Part of Sentence 3.5.2.1.(1)

Row Number	Classes of Registration for Persons Engaged in the Business of Providing *Design Activities* to the Public	Categories of Qualifications for *Inspectors* and Persons Described in Clauses 3.2.4.2.(1)(a) and (b) and 3.2.5.1.(1)(a)	Type of *Building*
5	*Plumbing* - House	*Plumbing* - House	All *plumbing* systems to which Part 7 of Division B applies that are appurtenant to a *building* that is a detached house, semi-detached house, townhouse or row house containing not more than two *dwelling units* in each house.
6	*Plumbing - All Buildings*	*Plumbing - All Buildings*	(a) All *plumbing* systems to which Part 7 of Division B applies, including (b) *buildings* and parts of *buildings* described in Column 4 of Row 5 of this Table.
7	HVAC - House	HVAC - House	All *building* systems, works, fixtures and service systems to which Section 9.32. or 9.33. of Division B applies that are appurtenant to a *building* that is a detached house, semi-detached house, townhouse or row house containing not more than two *dwelling units* in each house.
8	*Building* Services	*Building* Services	(a) *Building* systems, works, fixtures and service systems that are appurtenant to *buildings* described in Sentence 1.1.2.2.(1), (3) or (4) or Sentence 1.1.2.4.(1) of Division A and that relate to fire suppression, fire detection, smoke control, exhaust, vertical movement of smoke, energy efficiency, lighting and emergency power, and (b) *building* systems, works, fixtures and service systems appurtenant to *buildings* to which Part 6 of Division B applies or to which Section 9.32. or 9.33. of Division B applies, including (c) *buildings* and parts of *buildings* described in Column 4 of Row 7 or 11 of this Table.
9	*Building* Structural	*Building* Structural	Internal and external *loadbearing* structural elements essential to the stability or strength of a *building* described in Sentence 1.1.2.2.(2) or Sentence 1.1.2.4.(1) of Division A and that resist *dead loads* or *live loads* including, but not limited to, *foundations*, floors, walls, roofs, columns and beams.
Column 1	2	3	4

Table 3.5.2.1. (Cont'd)
Classes of Registration and Categories of Qualifications For Inspectors and Persons Who Carry Out Design Activities

Forming Part of Sentence 3.5.2.1.(1)

Row Number	Classes of Registration for Persons Engaged in the Business of Providing *Design Activities* to the Public	Categories of Qualifications for *Inspectors* and Persons Described in Clauses 3.2.4.2.(1)(a) and (b) and 3.2.5.1.(1)(a)	Type of *Building*
10	On-site *Sewage Systems*	On-site *Sewage Systems*	*Sewage systems* to which Part 8 of Division B applies.
11	Detection, Lighting and Power	Detection, Lighting and Power	Early warning and electrical systems including systems appurtenant to *buildings* described in Sentence 1.1.2.2.(1) or Sentence 1.1.2.4.(1) of Division A and that relate to fire alarm and detection systems, voice communication systems, lighting systems, emergency lighting systems or emergency power systems for *building* services in all *buildings*.
12	Fire Protection	Fire Protection	Fire suppression, fire detection, fire fighting and fire safety systems appurtenant to *buildings* described in Sentence 1.1.2.2.(1) or Sentence 1.1.2.4.(1) of Division A.
Column 1	2	3	4

Notes to Table 3.5.2.1.:

(1) An *inspector* qualified in one category of qualification may carry out plans review and inspection in another category where to do so does not constitute a substantial part of the plans review or inspection on any project.

(2) A person registered in one class of registration or a person qualified in one category of qualification may carry out *design activities* in another class or category where to do so does not constitute a substantial part of the *design activities* on any project.

3.5.2.2. Registered Code Agencies

(1) Table 3.5.2.2. sets out the classes of registration for *registered code agencies* and the categories of qualifications for persons described in Clauses 3.4.3.2.(1)(a) to (c).

r4

Table 3.5.2.2.
Classes of Registration and Categories of Qualifications for Registered Code Agencies

Forming Part of Sentence 3.5.2.2.(1)

Classes of Registration for *Registered Code Agencies*	Category of Qualification for Persons Described in Clauses 3.4.3.2.(1)(a) to (c)	Type of *Building* Reference to Table 3.5.2.1.
House	House	Column 4 of Row 1
	Plumbing - House	Column 4 of Row 5
	HVAC - House	Column 4 of Row 7
	On-Site *Sewage Systems*	Column 4 of Row 10
Small *Buildings*	Small *Buildings*	Column 4 of Row 2
	Plumbing - All *Buildings*	Column 4 of Row 6
	Building Services	Column 4 of Row 8
	Building Structural	Column 4 of Row 9
	On-Site *Sewage Systems*	Column 4 of Row 10
Large *Buildings*	Large *Buildings*	Column 4 of Row 3
	Plumbing - All Buildings	Column 4 of Row 6
	Building Services	Column 4 of Row 8
	Building Structural	Column 4 of Row 9
	On-site *Sewage Systems*	Column 4 of Row 10
Complex *Buildings*	Complex *Buildings*	Column 4 of Row 4
	Plumbing - All *Buildings*	Column 4 of Row 6
	Building Services	Column 4 of Row 8
	Building Structural	Column 4 of Row 9
	On-site *Sewage Systems*	Column 4 of Row 10
On-site *Sewage Systems*	On-site *Sewage Systems*	Column 4 of Row 10
Column 1	2	3

r1

Section 3.6. Insurance

3.6.1. Scope

3.6.1.1. Scope

(1) This Section prescribes, for the purposes of subsection 15.13(1) of the Act, the insurance coverage that *registered code agencies* and persons referred to in subsection 15.11(5) of the Act must have.

3.6.2. Insurance for Registered Code Agencies and Persons Referred to in Subsection 15.11(5) of the Act

3.6.2.1. Definition

(1) In this Subsection, *registered person* means a person who is registered under Article 3.2.4.2. or 3.4.3.2.

3.6.2.2. Scope

(1) Every person registered under Article 3.2.4.2. or 3.4.3.2. shall have insurance coverage under an insurance policy that satisfies the requirements set out in Article 3.6.2.3.

3.6.2.3. Insurance Coverage

(1) The insurance policy

(a) shall indemnify the *registered person* against liability imposed by law arising out of the performance of or the failure to perform services as a *registered person* during any time while the person is registered under Article 3.2.4.1. or 3.4.3.2. for claims that are first made and reported to the insurer during the period of insurance or during any extended reporting period required by Clause (1)(c),

(b) shall set out the name of the *registered person*,

(c) in the case of a *registered code agency* registered under Article 3.4.3.2.,

  (i) shall require an extended reporting period of two years for the purposes of giving notice of any claim or occurrence that the *registered code agency* could reasonably foresee might give rise to a claim, with respect to an event that occurs prior to the person ceasing to be insured,

- (ii) shall provide that the extended reporting period described in Subclause (i) shall commence on the day the *registered code agency* ceases to be insured, and
- (iii) shall require the *registered code agency* to make full payment of all premiums for the extended reporting period referred to in Subclause (i) as part of the premiums for the issuance of the insurance policy,

(d) shall provide for insurance coverage to commence,
- (i) on the date the *registered person* becomes registered, or
- (ii) in the case of a *registered person* previously insured in accordance with this Article, on the expiry of the previous policy,

(e) shall require the insurer to provide prompt written notice to the *director* if the policy is declared void for material misrepresentation,

(f) shall specify a limit of indemnity for any one claim and in the aggregate during any one period of insurance that is not less than
- (i) in the case of persons registered under Article 3.2.4.2.,
  - (A) $1,000,000 per claim and $2,000,000 in the aggregate, if the person billed $100,000 or more in fees in the 12 months immediately before the issuance of the policy,
  - (B) $500,000 per claim and $1,000,000 in the aggregate, if the person billed more than $50,000 and less than $100,000 in fees in the 12 months immediately before the issuance of the policy,
  - (C) $250,000 per claim and $500,000 in the aggregate, if the person billed $50,000 or less in fees in the 12 months immediately before the issuance of the policy, or
  - (D) the limits of indemnity for any one claim and in the aggregate that are set out in Sub-subclause (A), (B) or (C), as determined by reference to the person's estimated fees billings for the 12-month period immediately after the issuance of the policy, if the person has been registered less than one year before the issuance of the policy, and
- (ii) in the case of a *registered code agency* registered under Article 3.4.3.2., $1,000,000 per claim and $2,000,000 in the aggregate, except that those limits shall apply exclusively to the exercise of the powers and performance of the duties of a *registered code agency* under the Act and shall be in addition to any insurance applicable to any other activities carried on by the *registered code agency*.

(g) shall provide that any costs and expenses necessarily incurred by the insurer in the investigation, defence or settlement of claims under the policy shall not be part of the limit of indemnity set out in Clause (f) unless the limit of indemnity from any one claim exceeds $2,000,000,

(h) shall not provide that the insured shall be responsible for the first portion of any sum that the insured becomes legally liable to pay in respect of a claim made against him, her or it in respect of any one claim or occurrence in an amount exceeding the lesser of:
  (i) $70,000, and
  (ii) 5% of
    (A) the amount of fees billed by the insured in the 12 months immediately before the issuance of the policy, or
    (B) the amount of the insured's estimated fees billings for the 12-month period immediately after the issuance of the policy, if the insured has been registered under Article 3.2.4.2. less than one year before the issuance of the policy,

(i) shall provide that it cannot be cancelled by the insured unless,
  (i) the insured immediately replaces the policy with another policy that satisfies the requirements of this Article,
  (ii) the insurer has given notice in writing of the proposed cancellation to the *director*, and
  (iii) the notice described in Subclause (ii) was received by the *director* at least 30 days before the day the policy is cancelled,

(j) shall provide that it cannot be cancelled by the insurer unless,
  (i) it is cancelled for non-payment of a premium,
  (ii) the insurer has given notice in writing of the proposed cancellation to the *director*, and
  (iii) the notice described in Subclause (ii) was sent to the *director* at least 30 days before the day the policy is cancelled,

(k) shall provide for the continuation of coverage if the insured is adjudged a bankrupt, insolvent, incompetent or dies during the period of insurance, and

(l) may provide that coverage be subject to such exclusions and conditions and otherwise on such terms as are consistent with normal insurance industry practice from time to time.

Section 3.7. Registered Code Agencies

3.7.1. Appointment of Registered Code Agency under Section 4.1 of the Act

3.7.1.1. Agreements

(1) An agreement between a *principal authority* and a *registered code agency* under subsection 4.1(1) of the Act shall be made in writing and shall

(a) specify the functions that the *registered code agency* is authorized to perform,
(b) specify the *construction* of the *building* or class of *buildings* in respect of which the functions will be performed,
(c) set out the procedure by which the *principal authority* will appoint the *registered code agency* to perform specified functions in respect of the *construction* of a *building* or class of *buildings*,
(d) require that the *registered code agency* carry out its functions under the agreement in accordance with the Act and this Code and the quality management plan described in Clause 3.4.3.2.(1)(d),
(e) provide for the provision by the *principal authority* to the *registered code agency* of such plans, specifications and other information, including applications for permits, that the *registered code agency* may require in order to act under the appointment.

(2) An agreement under Subsection (1),

(a) may contain provisions in addition to the provisions required under Subsection (1) if the additional provisions are not inconsistent with the provisions required under that Subsection, and
(b) shall not contain any provision that relates to the *construction* of *buildings* for a class of registration for which the *registered code agency* is not registered under Section 3.4.

3.7.1.2. Appointments

(1) An appointment under subsection 4.1 (2) of the Act by a *principal authority* of a *registered code agency* to perform specified functions in respect of the *construction* of a *building* or class of *buildings* shall be made in writing and shall

(a) specify the *construction* of the *building* or class of *buildings* in respect of which the appointment relates,
(b) specify the functions described in section 15.15 of the Act that the *registered code agency* is appointed to perform, and

(c) require that the *registered code agency* carry out its functions under the appointment in 3.4.3.2.(1)(d).

(2) An appointment described in Subsection (1) may contain provisions in addition to the provisions required under Subsection (1) if the additional provisions are not inconsistent with the provisions required under that Subsection.

3.7.2. When a Registered Code Agency may not be Appointed or Continue to Act under an Appointment

3.7.2.1. General

(1) A *registered code agency* may not be appointed to perform functions under section 15.15 of the Act in respect of a *building* or continue to act under an appointment in respect of a *building* if the *registered code agency*

(a) is not registered under Section 3.4. in respect of the class of registration to which the *construction* of the *building* relates, or

(b) is in breach of a condition of its registration under Article 3.4.3.7.

(2) Where under Section 1.2. the design and general review of *construction* of a *building* must be undertaken by an *architect* or *professional engineer* or both, a *registered code agency* may not be appointed to perform functions under section 15.15 of the Act or continue to act under an appointment in respect of the *construction* of the *building* unless the *registered code agency* or an officer, director, partner or employee of the *registered code agency* is an *architect* or *professional engineer* or both, as the case may be.

(3) A *registered code agency* shall not be appointed under the Act or continue to act under an appointment if the *registered code agency* would be in a conflict of interest.

(4) For the purposes of Sentence (3), a *registered code agency* would be in a conflict of interest if the *registered code agency* or an officer, director, partner or employee of the *registered code agency* or any person engaged by the *registered code agency* to perform functions for it

(a) has participated or participates, in any capacity, in *design activities* or *construction* relating to any part of the *building* to which an appointment relates,

(b) is or has been employed within the previous 180 days by a person who carried out *design activities* or *construction* relating to any part of the *building*,

(c) has a professional or financial interest in:
  - (i) the *construction* of the *building* to which the appointment relates,
  - (ii) the *building* to which the appointment relates, or
  - (iii) the person responsible for the design of the *building* to which the appointment relates,

(d) is an elected official, officer or employee of a *principal authority*.

(5) For the purposes of Clause (4)(c), involvement with a *building* as a *registered code agency* and entitlement to any fee paid for acting as a *registered code agency* in respect of a *building* shall not be considered to be a professional or financial interest in the *construction* of the *building*, the *building* or the person responsible for the design of the *building*.

3.7.3. Additional Functions that Registered Code Agencies may be Appointed To Perform

3.7.3.1. General

(1) In addition to the functions described in paragraphs 1 to 5 of section 15.15 of the Act, a *registered code agency* may be appointed to perform the functions set out in Sentence 3.7.4.3.(5).

3.7.4. Manner in which Registered Code Agency shall Perform Functions

3.7.4.1. General

(1) The *registered code agency* shall perform the functions specified in an appointment in accordance with the Act and this Code and the quality management plan referred to in Clause 3.4.3.2.(1)(d).

(2) The *registered code agency* shall perform the functions specified in an appointment in accordance with the code of conduct set out in Supplementary Standard SC-1.

3.7.4.2. Plans Review and Inspection Activities

(1) The *registered code agency* shall ensure that plans review and inspection activities of the *registered code agency* are carried out by a person who has the qualifications set out in Clause 3.4.3.2.(1)(b) or (c) in respect of the type of *building* set out in Column 3 of Table 3.5.2.2. for which the person is carrying out the activities.

(2) Not more than 180 days after the day a notice is given under Sentence 3.4.3.8.(1) by the *director* to the *registered code agency*, the *registered code agency* shall

(a) ensure that plans review and inspection activities of the *registered code agency* in the category of qualification to which the notice relates are carried out by persons who have successfully completed all new examinations referred to in the notice, and

(b) provide the following information to the *director*:

  (i) the name and residence address of the person, and

  (ii) information required by the *director* about the examinations that the person or persons have successfully completed.

(3) A *registered code agency* shall prepare written records of every inspection of the *construction* of a *building* that is undertaken by the *registered code agency* in the course of performing functions under an appointment

(4) The record required under Sentence (3) shall include

(a) the date of receipt of the notice of readiness for inspection, if any,

(b) the date of the inspection,

(c) the reason for the inspection,

(d) whether non-compliance with this Code was observed in the course of the inspection and the details of the non-compliance.

(5) If a *registered code agency* has issued an order under subsection 12(2), 13(1) or 13(6) of the Act, the *registered code agency* shall prepare a written record consisting of

(a) a copy of the order,

(b) the persons on whom the order was served and the date and manner of service,

(c) when and how the order was complied with, and

(d) if the order has not been complied with, the efforts made by the *registered code agency* to achieve compliance by the persons responsible for compliance.

3.7.4.3. Issuance of Certificates by Registered Code Agencies

(1) Subject to Sentence (2), every certificate issued under the Act by a *registered code agency* shall, in accordance with the quality management plan referred to in Clause 3.4.3.2(1)(d), be signed by the *registered code agency* or, if the *registered code agency* is a corporation or partnership, by a person described in Clause 3.4.3.2.(1)(a).

(2) If the certificate is issued in respect of the *construction* of a *building* that would under Section 1.2.1. be required to be designed by and under the general review of an *architect* or *professional engineer* or both, the certificate shall also be signed on behalf of the *registered code agency* by an *architect* or a *professional engineer* or both, as the case may be, who is an officer, director, partner or employee of the *registered code agency*.

(3) A *registered code agency* may issue a *plans review certificate* if the *registered code agency*
(a) has been appointed to perform the functions described in clause 4.1(4)(a) or (c) of the Act in respect of the proposed *construction* of the *building* to which the *plans review certificate* applies,
(b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
(c) is satisfied on reasonable grounds that, on date on which the *plans review certificate* is issued, the proposed *construction* of the *building* to which the *plans review certificate* relates is in compliance with this Code.

(4) A *registered code agency* may issue a *change certificate* if the *registered code agency*
(a) has been appointed to perform the functions described in clauses 4.1(4)(a) to (c) of the Act in respect of the *construction* or proposed *construction* of the *building* to which the *change certificate* applies,
(b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
(c) is satisfied on reasonable grounds that, on the date on which the *change certificate* is issued, the proposed *construction* of the *building* to which the *change certificate* relates is in compliance with this Code.

(5) A *registered code agency* may issue a *certificate for the occupancy of a building not fully completed* if the *registered code agency*
(a) has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of the *building* to which the *certificate for the occupancy of a building not fully completed* applies,
(b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
(c) is satisfied on reasonable grounds that, on the date on which the *certificate for the occupancy of a building not fully completed* is issued, the *construction* of the *building* to which the *certificate for the occupancy of a building not fully completed* relates is in compliance with Clauses 1.3.3.1.(2)(a) to (q).

(6) A *registered code agency* may issue a *final certificate* if the *registered code agency*
(a) has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of the *building* to which the *final certificate* applies,
(b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
(c) is satisfied on reasonable grounds that on the date on which the *final certificate* is issued, the *construction* of the *building* to which the *final certificate* relates is in compliance with this Code.

(7) Every certificate issued under the Act by a *registered code agency* shall be in a form approved by the *Minister*.

3.7.4.4. Issuance of Orders by Registered Code Agencies

(1) Orders under subsections 13(6) and 14(1) of the Act shall, in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d), be signed by the *registered code agency* or a person described in Clause 3.4.3.2.(1)(a).

(2) Orders under subsections 12(2) and 13(1) and clause 18(1)(f) of the Act shall, in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d), be signed by the *registered code agency* or by a person described in Clause 3.4.3.2.(1)(b) or (c).

3.7.4.5. Authorized Persons

(1) Persons who possess the qualifications described in Clauses 3.4.3.2.(1)(a), (b) and (c) are prescribed for the purposes of subsection 15.17(1) of the Act.

(2) The certificate of authorization referred to in subsection 15.17(2) of the Act shall, in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d), be signed by a representative of the *registered code agency* who is described in Clause 3.4.3.2.(1)(a) and shall contain the following information
(a) the name of the *registered code agency* and any identifying number issued by the *director* to the *registered code agency*,
(b) the title, business address and business telephone number of a representative of the *registered code agency* who may be contacted to answer questions about the certificate and the authorization to which it relates,
(c) the name of the authorized person and any identifying number issued by the *director* to the authorized person in respect of that person's qualifications,
(d) the scope of the powers that may be exercised and the functions that may be performed by the authorized person,
(e) the date of issuance of the certificate.

(3) Every person described in Sentence (1) shall carry his or her certificate of authorization when performing duties and shall produce the certificate for inspection upon request.

3.7.4.6. Prohibition

(1) A *registered code agency* shall not dismiss, suspend, demote, discipline, harass or otherwise disadvantage an employee, or deny an employee a benefit of employment, by reason that
(a) the employee, acting in good faith and on the basis of reasonable belief, has disclosed to the *director* that the *registered code agency* or any other person has contravened or intends to contravene a provision of the Act or this Code,
(b) the employee, acting in good faith and on the basis of reasonable belief, has refused or stated an intention of refusing to do anything that is a contravention of a provision of the Act or this Code,

(c) the employee, acting in good faith and on the basis of reasonable belief, has done or stated an intention of doing anything that is required to be done in order that a provision of the Act or this Code not be contravened, or
(d) the *registered code agency* believes that the employee will do anything referred to in Clause (a), (b) or (c).

(2) Nothing in this Section impairs any right of an employee either at law or under an employment contract or collective agreement.

(3) In this Article

"employee" includes an independent contractor and "employer" includes the person who retains an employee who is an independent contractor.

3.7.4.7. Information and Records

(1) The *registered code agency* shall maintain records of all plans review and inspection activity, of all certificates and orders and of any other activities taken in carrying out functions under an appointment in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d).

(2) Any information collected by a *registered code agency* in the course of the exercise of powers and the performance of duties under this Act may be used only for the purpose of performing functions under an appointment under subsection 4.1(2) of the Act and may be disclosed only
(a) to a *principal authority* pursuant to an agreement under subsection 4.1(1) of the Act,
(b) to a *principal authority* to aid the enforcement in any manner of the Act,
(c) where required or permitted under this Act, this Code, other applicable legislation or an order of a court.

(3) A *registered code agency* shall ensure that any agreement under which the *registered code agency* engages a person to assist the *registered code agency* to perform functions under an appointment includes a provision that requires the person to comply with Sentences (1) and (2).

3.7.5. Termination of Appointment of a Registered Code Agency

3.7.5.1. Termination of an Appointment Made under Subsection 4.1(2) of the Act

(1) A *principal authority* may, in accordance with the terms of an agreement under subsection 4.1(1) of the Act, terminate the appointment of a *registered code agency* before the appointment expires under section 15.19 of the Act.

3.7.6. Information to be Provided

3.7.6.1. Information to be Provided by a Principal Authority to the Director

(1) If a *principal authority* that has appointed a *registered code agency* terminates the appointment before the appointment expires under section 15.19 of the Act, the *principal authority* shall, as soon as possible after the termination, give the *director* notice of the termination and such other information concerning the circumstances of the termination and as may be required by the *director*.

(2) If a *principal authority* has issued an order under subsection 15.21(1) of the Act, the *principal authority* shall as soon as possible after the order is issued give the *director* a copy of the order and such other information concerning the circumstances of the order and as may be required by the *director*.

3.7.6.2. Information to be Provided by a Registered Code Agency to the Director

(1) A *registered code agency* that becomes or expects to become unable to carry out the functions for which the *registered code agency* was appointed shall as soon as possible give notice to the *director* of this situation.

3.7.6.3. Information to be Provided by a Registered Code Agency to the Chief Building Official

(1) A *registered code agency* shall notify the *chief building official* if the *registered code agency* becomes or expects to become unable to carry out the functions for which the *registered code agency* was appointed.

(2) A *registered code agency* shall give copies of the following records to the *chief building official*

(a) all orders issued by the *registered code agency* under subsections 12(2), 13(1) and 13(6) of the Act,

r_4 (b) all written records prepared by the *registered code agency* under Sentences 3.7.4.2.(3), (4) and (5),

(c) all *final certificates* that are issued by the *registered code agency*,

(d) records described in Section 2.1. relating to the use of an alternative solution, and

(e) any records of information, copies of documents or things, tests, samples or photographs produced, removed, required, taken or ordered to be taken under subsection 18(1) of the Act.

(3) The documents referred to in Sentence (2) shall be given to the *chief building official*

(a) within the time period specified in any agreement under Article 3.7.1.1. or appointment under Article 3.7.1.2. in respect of which the documents relate, whichever time period ends earlier,

(b) within 15 days after the expiry or termination of the appointment of the *registered code agency* in respect of which the documents relate, if there is no time period specified in the agreement or appointment referred to in Clause (a), or

(c) if the *chief building official* has given notice to the *registered code agency* that he or she requires the documents before the time set out in Clause (a) or (b), within 2 days after the request for documents.

(4) The requirements of Sentence (2) apply even if the *registered code agency* is no longer registered under Subsection 3.4.

(5) If a *registered code agency* in the course of carrying out functions under an appointment has reason to believe that a *building* described in Sentence (7) is unsafe within the meaning of subsection 15.9(2) or (3) of the Act, the *registered code agency* shall as soon as possible give notice to the *chief building official* of

(a) the location of the *building*, and

(b) the reason why the *registered code agency* has reason to believe that the *building* is unsafe.

(6) A *registered code agency* that has given a notice to the *chief building official* under Sentence (5) shall give the *chief building official* such other information about the unsafe condition as the *chief building official* may require.

(7) Sentence (5) applies to
(a) a *building* in respect of which the *registered code agency* has been appointed to perform functions, and
(b) a *building* that has been adversely affected by *construction* of a *building* referred to in Clause (a).

(8) For the purposes of Sentence (3), a time period referred to in Clause (3)(a), (b) or (c)
(a) does not start until the day after the day on which the obligation to provide the documents arises, and
(b) does not include Saturdays, holidays and all other days on which the offices of the *principal authority* are not open for the transaction of business with the public.

3.7.7. Referral of Stop Work Order

3.7.7.1. Referral

(1) A *registered code agency* shall refer a matter under subsection 14(5) of the Act to the *chief building official* by giving the *chief building official*, as soon as possible
(a) a report that contains the following information:
r_4 (i) a copy of the order made under section 12 or 13 of the Act that was not complied with and of the order under section 14 of the Act,
(ii) the persons on whom the orders were served and the date and manner of service, and
(iii) a statement that the orders have not been complied with, and
(b) such other information as the *chief building official* may require in respect of the matter that has been referred.

(2) The report under Clause (1)(a) shall be signed, in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d), by the *registered code agency* or, if the *registered code agency* is a corporation or partnership, by a person described in Clause 3.4.3.2.(a).

Part 4
Transition, Revocation and Commencement

Section 4.1. Transition Rule

4.1.1. Transition, December 2006 3

4.1.2. Transition, July 2007 3

e3 4.1.3. Transition, April 2010 4

Section 4.2. Revocation

4.2.1. Revocation 4

Section 4.3. Commencement

4.3.1. Commencement 4

Part 4
Transition, Revocation and Commencement

Section 4.1. Transition Rule

4.1.1. Transition, December 2006

4.1.1.1. Transition Rule

(1) Subject to Sentences (2) and (3), Ontario Regulation 403/97 (Building Code), as it read on December 30, 2006, is deemed to continue in force with respect to construction,
(a) for which a permit has been issued before December 31, 2006, or
(b) for which the working drawings, plans and specifications are substantially completed before December 31, 2006, and for which an application for a permit is made before March 31, 2007 under that Regulation, as it read on December 30, 2006.

(2) Sentence (1) does not apply unless the *construction* is commenced within six months after the permit is issued.

(3) Division C, except for Section 2.1. of that Division, applies to *construction* described in Sentence (1) and prevails over all provisions of Ontario Regulation 403/97 (Building Code), as it read on December 30, 2006.

$r_{5.1}$ **(4)** Despite the repeal of section 9 of the Act, the *chief building official* or a *registered code agency* continues to have the powers set out in that section, as it read immediately before subsection 2(4) of Schedule 21 to the *Good Government Act, 2009* comes into force, with respect to *construction* to which Sentence (1) applies, and they may exercise those powers subject to the conditions referred to in subsection 9(3) of the Act.

r_1 4.1.2. Transition, July 2007

4.1.2.1. Transition Rule

(1) Subject to Sentence (2), this Regulation as it read on June 30, 2007 is deemed to continue in force with respect to construction,
(a) for which a permit has been issued before July 1, 2007, or

(b) for which the working drawings, plans and specifications are substantially completed before July 1, 2007 and for which an application for a permit is made before October 1, 2007 under this Code as it read on June 30, 2007.

(2) Sentence (1) does not apply unless the construction is commenced within six months after the permit is issued.

r_2 4.1.3. Transition, April 2010

4.1.3.1. Transition Rule

(1) Subject to Sentence (2), this Regulation as it read on March 31, 2010 is deemed to continue in force with respect to *construction* for which a permit has been applied for or issued before April 1, 2010.

(2) Sentence (1) does not apply unless the *construction* is commenced within six months after the permit is issued.

Section 4.2. Revocation

4.2.1. Revocation

4.2.1.1. Revocation

(1) Ontario Regulation 403/97 is revoked.

Section 4.3. Commencement

4.3.1. Commencement

4.3.1.1. Effective Date

(1) This Regulation comes into force on December 31, 2006.

CODE AND GUIDE FOR PLUMBING 2006

Volume 2

July 1, 2010 update

Ministry of Municipal Affairs and Housing
Building and Development Branch

Ontario

COMMENCEMENT

Supplementary Standards SA-1 and SC-1 come into force on the 31st day of December, 2006.

m_8 Ruling of the Minister of Municipal Affairs and Housing (Minister's Ruling) MR-09-S-09 takes effect on the 1st day of January, 2010.
m_{10} Ruling of the Minister of Municipal Affairs and Housing (Minister's Ruling) MR-09-S-11 takes effect on the 1st day of January, 2011.

a_1 Amendment made to Appendix A or B issued April 2nd, 2007.
a_2 Amendment made to Appendix A or B issued June 9th, 2009.
a_3 Amendment made to Appendix A or B issued January 1st, 2010.
a_4 Amendment made to Appendix A or B issued January 1st, 2011.

ERRATA

e_1 Issued April 2nd, 2007.
e_2 Issued June 18th, 2008.
e_3 Issued June 9th, 2009.
e_4 Issued January 1st, 2010.

ACKNOWLEDGMENT

The Ministry of Municipal Affairs and Housing gratefully acknowledges the contribution of Mr. Rainier Blundel of George Brown College for the plumbing illustrations contained in Appendix A of this document.

© Copyright Queen's Printer for Ontario 2010
All rights reserved.
Questions regarding copyright, including reproduction and distribution, may be directed to the Director, Building and Development Branch of the Ministry of Municipal Affairs and Housing.

Appendix A

Appendix A to this document is included for explanatory purposes only and does not form part of the requirements. The bold-face reference numbers that introduce each item apply to the requirements in the Code.

Symbols and Abbreviations

The following symbols and abbreviations are used in the diagrams of Appendix A.

BG	Bathroom group
BT	Bathtub
CO	Cleanout
DF	Drinking fountain
F.A.I.	Fresh air inlet
FD	Floor drain
KS	Kitchen sink
LAV	Lavatory
LT	Laundry tray
WC	Water closet

Explanatory Material for Division A

a₁ **A-1.4.1.2. Plumbing System.** "Plumbing" is defined in the *Building Code Act, 1992*. Each of the three systems (draining, venting, water) appearing in the definition are further defined in Article 1.4.1.2., with the end result that a plumbing system encompasses all three elements.

Other piping systems as listed below are excluded from plumbing system since the definition of water system limits the system to the point of juncture with outlets, fixtures, etc. Similarly, a drainage system starts at the fixture or plumbing appliance it drains.

A plumbing system does not include

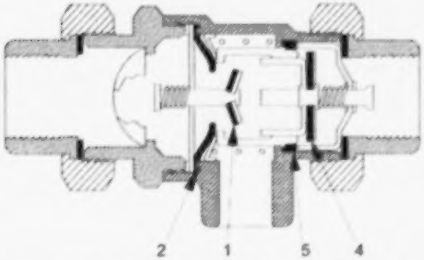
(a) a system of piping,
  (i) for space heating in which water is used as a medium to transfer heat,
  (ii) in which liquids or vapours are circulated for the purpose of cooling or refrigeration,
  (iii) through which air is passed for the purpose of controlling the temperature, humidity or motion of air passing through the system,
  (iv) that conveys water for the purpose of providing water or nutrients to the soil,
  (v) that conveys water for the purpose of landscaping or for the care of animals, birds or fish,
  (vi) that transmits force by means of water or by means of a liquid other than water in which water is used for cooling,
  (vii) that conveys liquids for the purpose of melting ice or snow, or
  (viii) that uses water in the conveyance of flammable gas or fuel; or

(b) a well, a well pump installed for the purpose of conveying water from a well, a pressure tank and pump if the tank and pump are combined as a unit, the piping between any well pump and the well, the piping between a well pump and a pressure tank that is installed separate from the pump and the connection of the piping to such pressure tank, and when there is no well pump, any piping connected to the well for a distance of three feet from the outside of the well.

A-1.4.1.2.

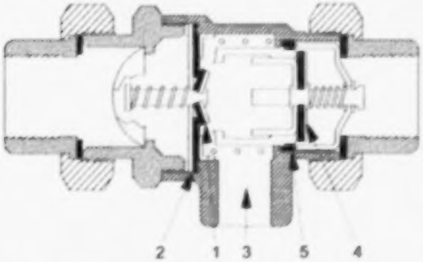
BACKFLOW PREVENTER

Normal Flow - Checks Open - Vent Closed



With flow through valve, primary check (1) opens away from diaphragm (2). Atmospheric vent remains closed by deflection of diaphragm seal (2). Secondary check (4) opens away from downstream seat (5) permitting flow of water through the valve.

Negative Supply Pressure - Checks Closed - Vent Open



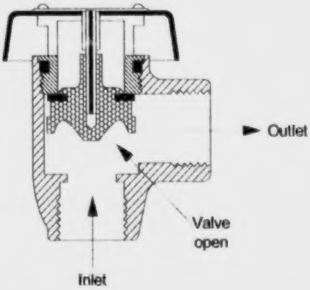
With a back-siphonage condition created, secondary check (4) seals tightly against downstream seat (5). Primary check (1) seals tightly against diaphragm (2). Atmospheric vent (3) is now open permitting air to enter air break chamber.

In the event of fouling of downstream check valve, leakage would be vented to atmosphere through the vent port thereby safeguarding the potable water system from contamination.

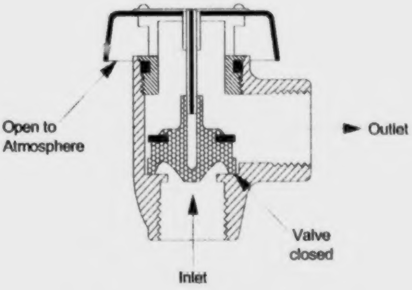
A-1.4.1.2.

BACK-SIPHONAGE PREVENTER

a) Normal operation with valve open

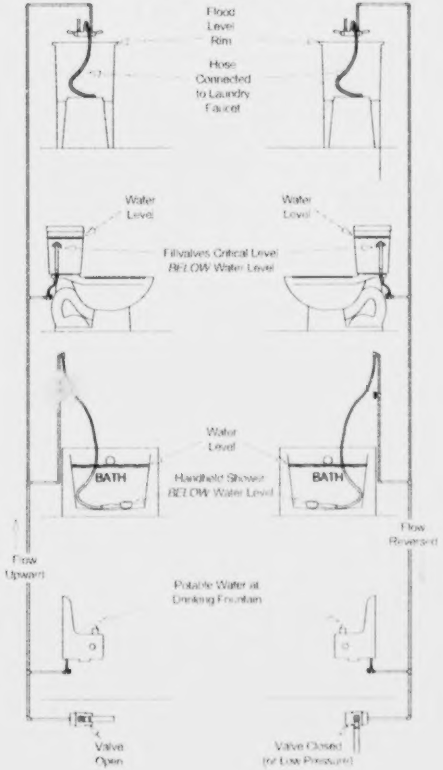

Outlet
Valve open
Inlet

b) Backflow condition with valve closed


Open to Atmosphere
Outlet
Valve closed
Inlet

A-1.4.1.2.

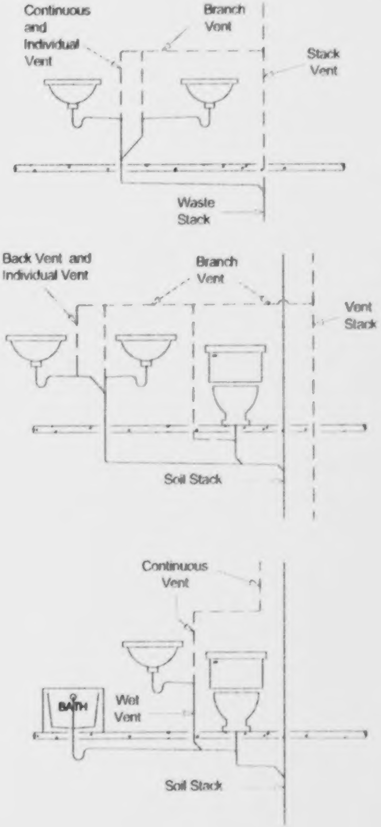
BACK-SIPHONAGE


Flood
Level
Rim
Hose
Connected
to Laundry
Faucet
Water
Level
Water
Level
Fillvalves Critical Level
BELOW Water Level
Water
Level
BATH
Handheld Shower
BELOW Water Level
BATH
Flow
Reversed
Flow
Upward
Potable Water at
Drinking Fountain
Valve
Open
Valve Closed
(or Low Pressure)

When there is low pressure or the water is shut-off and the riser is draining, non-potable water is fed to the lower fixtures form the extra hose on the laundry tray (Tub) faucet, the fillvalve below the water level in the toilet tank or the handheld hose left in a bathtub filled with water.

A-1.4.1.2.

BRANCH VENT, BACK VENT, CONTINUOUS VENT

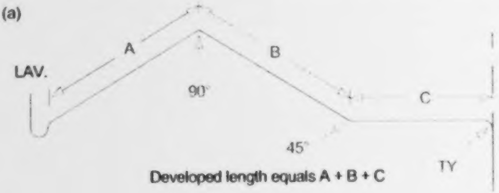

Continuous and Individual Vent
Branch Vent
Stack Vent
Waste Stack
Back Vent and Individual Vent
Branch Vent
Vent Stack
Soil Stack
Continuous Vent
BATH
Wet Vent
Soil Stack

A-1.4.1.2.

DEVELOPED LENGTH

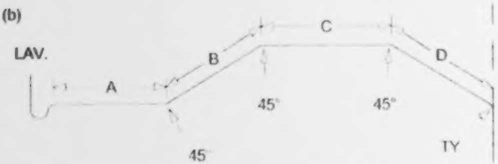
Developed length means the length along the centre line of the pipe and fittings.

(a)


LAV.
A
B
C
90°
45°
TY

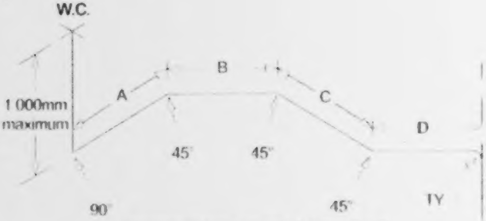
Developed length equals A + B + C

(b)


LAV.
A
B
C
D
45°
45°
45°
TY

Developed length equals A + B + C + D

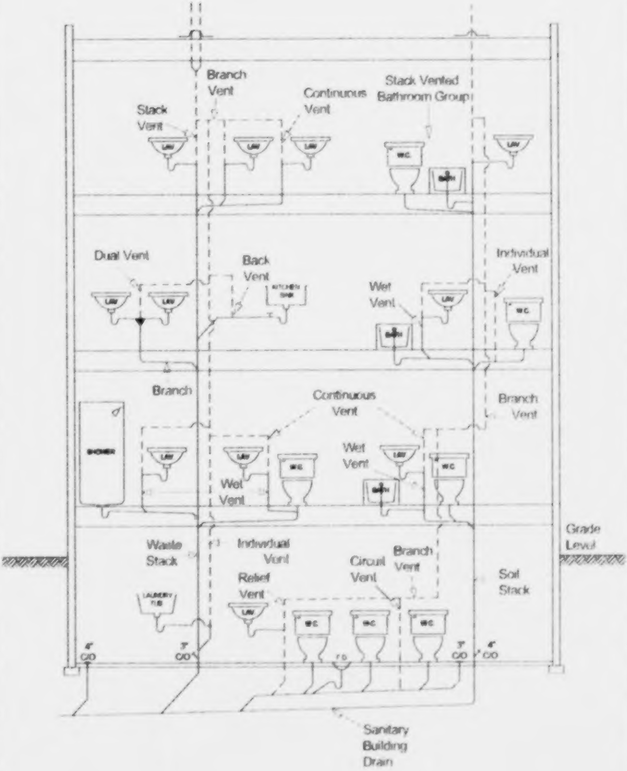
(c)


W.C.
1 000mm maximum
A
B
C
D
45°
45°
90°
45°
TY

Developed length equals A + B + C + D

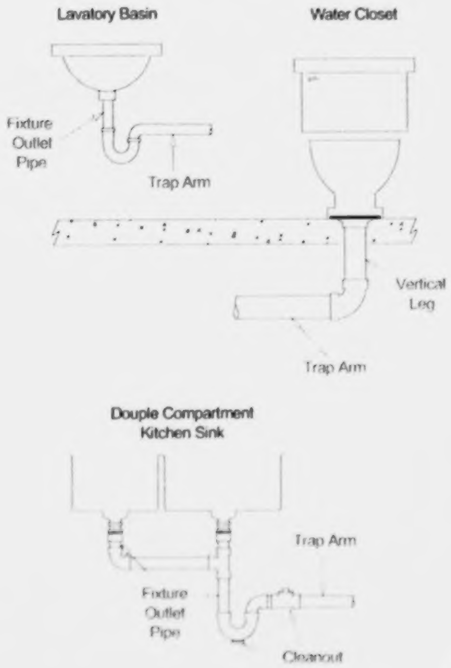
A-1.4.1.2.

DRAINAGE AND VENTING SYSTEMS


Branch Vent
Continuous Vent
Stack Vented Bathroom Group
Stack Vent
LAV
W.C.
BATH
Dual Vent
Back Vent
KITCHEN SINK
Wet Vent
Individual Vent
Branch
Continuous Vent
Branch Vent
SHOWER
Wet Vent
Wet Vent
Grade Level
Waste Stack
Individual Vent
Relief Vent
Circuit Vent
Branch Vent
Soil Stack
LAUNDRY TUB
F.D.
4" CO
3" CO
3" CO
4" CO
Sanitary Building Drain

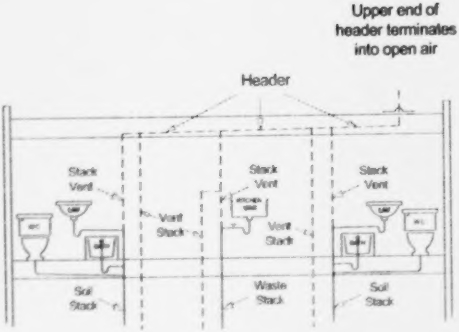
A-1.4.1.2.

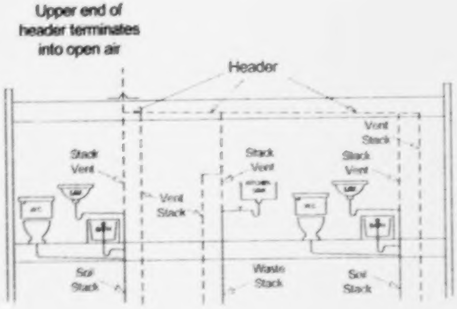
FIXTURE OUTLET PIPE AND TRAP ARM


Lavatory Basin
Water Closet
Fixture Outlet Pipe
Trap Arm
Vertical Leg
Trap Arm
Douple Compartment Kitchen Sink
Trap Arm
Fixture Outlet Pipe
Cleanout

A-1.4.1.2.

HEADER

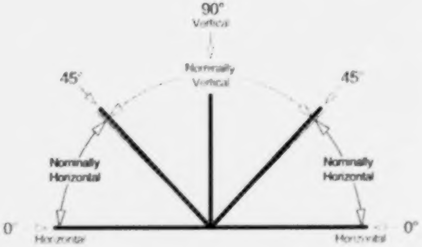

Upper end of
header terminates
into open air
Header
Stack
Vent
Vent
Stack
Stack
Vent
Vent
Stack
Stack
Vent
Soil
Stack
Waste
Stack
Soil
Stack

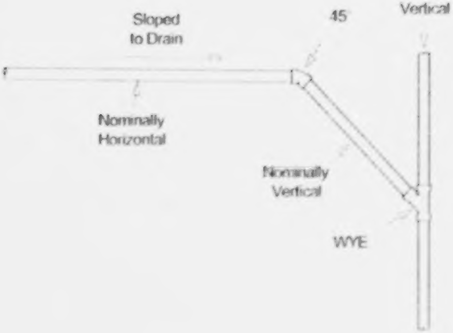

Upper end of
header terminates
into open air
Header
Vent
Stack
Stack
Vent
Stack
Vent
Vent
Stack
Stack
Vent
Soil
Stack
Waste
Stack
Soil
Stack

Although a header is similar to a branch vent, it serves the special purpose of connecting the tops of stack vents or vent stacks. Use Table 7.5.8.3. for sizing.

A-1.4.1.2.

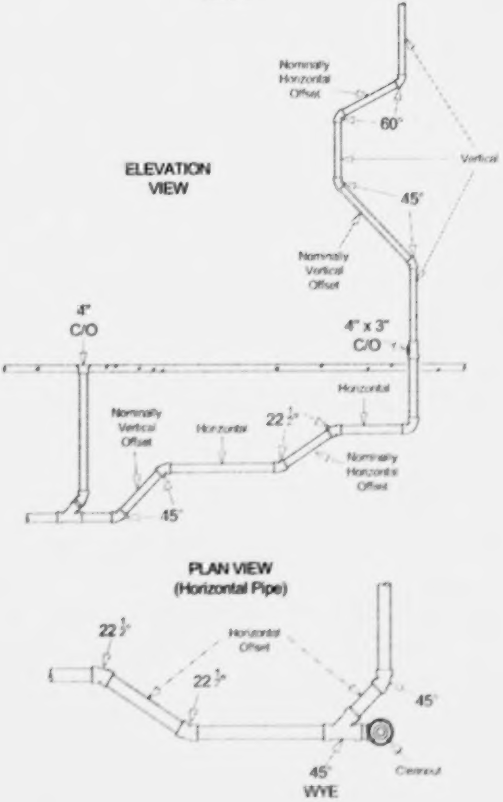
NOMINALLY HORIZONTAL AND NOMINALLY VERTICAL


90°
Vertical
Nominally
Vertical
45°
45°
Nominally
Horizontal
Nominally
Horizontal
0°
Horizontal
Horizontal
0°


Sloped
to Drain
45°
Vertical
Nominally
Horizontal
Nominally
Vertical
WYE

A-1.4.1.2.

OFFSET


Nominally Horizontal Offset
60°
Vertical
ELEVATION VIEW
45°
Nominally Vertical Offset
4" C/O
4" x 3" C/O
Horizontal
Nominally Vertical Offset
Horizontal
22 ½°
Nominally Horizontal Offset
45°
PLAN VIEW (Horizontal Pipe)
22 ½°
Horizontal Offset
22 ½°
45°
45° WYE
Cleanout

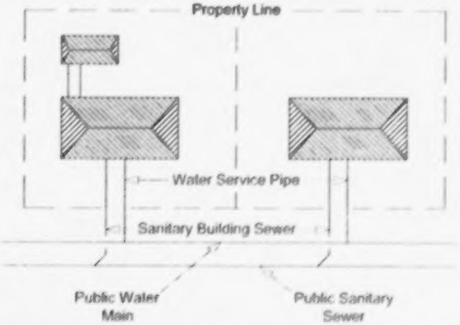
Explanatory Material for Division B

A-7.1.5.4.(1) Separate Services. Building sewers and water service piping serving buildings that are not located within the same property may be interconnected if the owners of the properties and the municipality enter into an agreement that is registered against the title to which it applies.

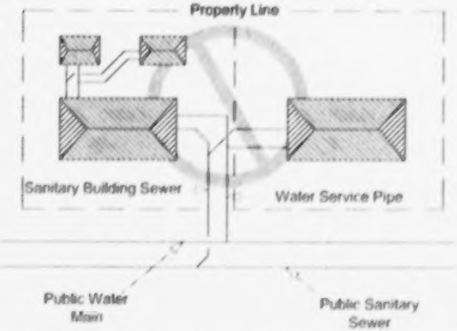
A-7.1.5.4.(1)

SERVICE PIPING

(a) Permitted


Property Line
Water Service Pipe
Sanitary Building Sewer
Public Water Main
Public Sanitary Sewer

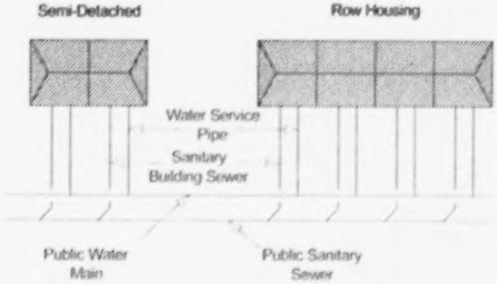
(b) ***Not Permitted*** - services shall not cross adjacent property lines nor serve more than one auxiliary building


Property Line
Sanitary Building Sewer
Water Service Pipe
Public Water Main
Public Sanitary Sewer

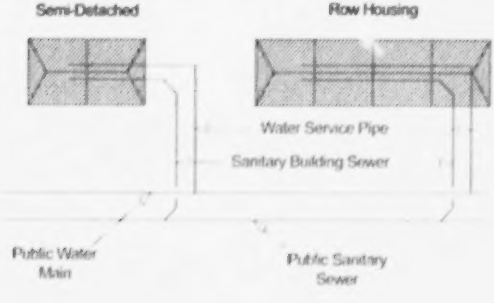
A-7.1.5.4.(1)

SERVICE PIPING

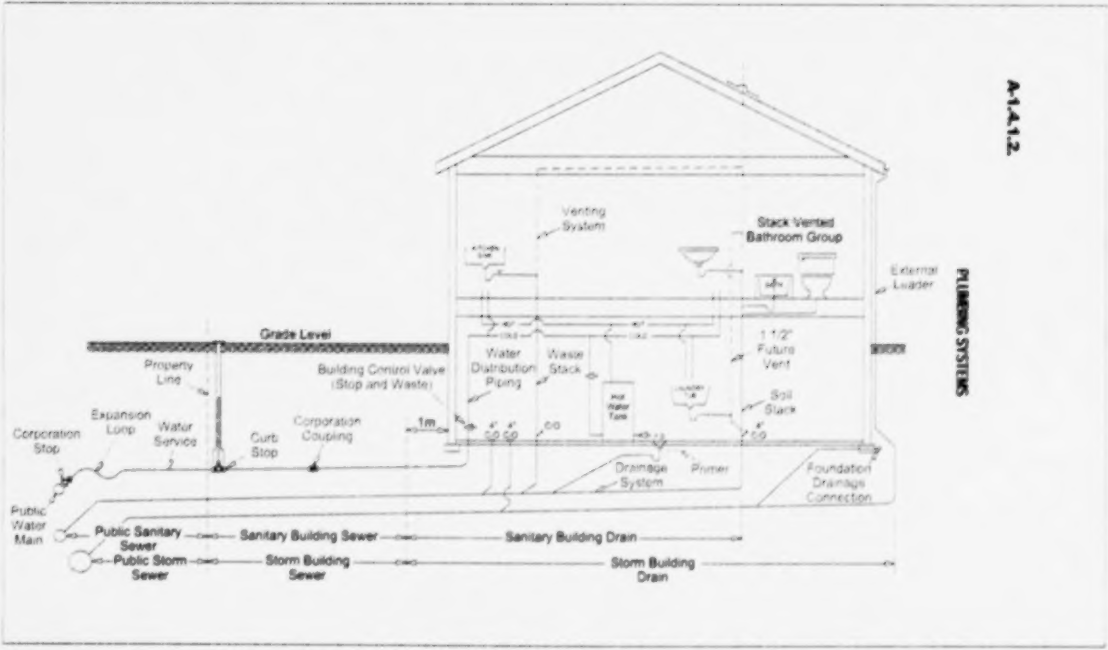
(c) Permitted


Semi-Detached
Row Housing
Water Service Pipe
Sanitary Building Sewer
Public Water Main
Public Sanitary Sewer

(d) Permitted


Semi-Detached
Row Housing
Water Service Pipe
Sanitary Building Sewer
Public Water Main
Public Sanitary Sewer

The layout as shown in diagram (d) above may require special arrangements to ensure that access can be provided to all parts of the service pipes.

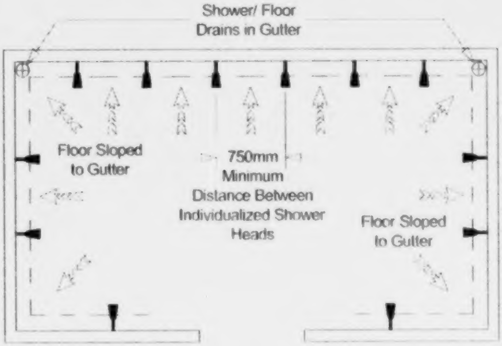

Venting System
Stack Vented Bathroom Group
External Leader
Grade Level
1 1/2" Future Vent
Water Distribution Piping
Waste Stack
Property Line
Building Control Valve (Stop and Waste)
Soil Stack
Hot Water Tank
Expansion Loop
Water Service
Corporation Coupling
Corporation Stop
Curb Stop
1m
4"
C/O
Drainage System
Primer
Foundation Drainage Connection
Public Water Main
Public Sanitary Sewer
Sanitary Building Sewer
Sanitary Building Drain
Public Storm Sewer
Storm Building Sewer
Storm Building Drain

A-7.2.2.3. Showers. One method of ensuring that the floor complies with Article 7.2.2.3. is to use a non-ferrous sheet metal or a rubber or plastic membrane and where the protected floor area adjoins a perimeter wall, the water stop shall be turned up at least 100 mm above the waste opening.

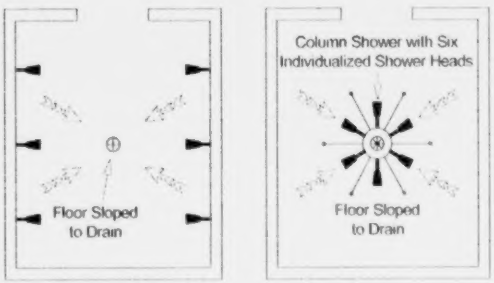
A-7.2.2.3.

SHOWERS

(a) Permitted - Floor slopes to gutter away from other showers, with a maximum of six individualized shower heads per drain.


Shower/ Floor
Drains in Gutter
Floor Sloped
to Gutter
750mm
Minimum
Distance Between
Individualized Shower
Heads
Floor Sloped
to Gutter

(b) Six Individualized Showers to a Single Drain



Not Permitted

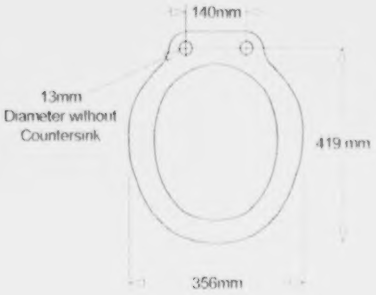
Permitted

Floor Sloped
to Drain
Column Shower with Six
Individualized Shower Heads
Floor Sloped
to Drain

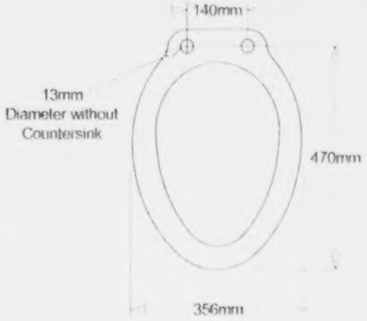
A-7.2.2.5.(1)

WATER CLOSET BOWL CONTOURS

(a) Regular Rim Contour for Water Closet Bowls


140mm
13mm
Diameter without
Countersink
419 mm
356mm

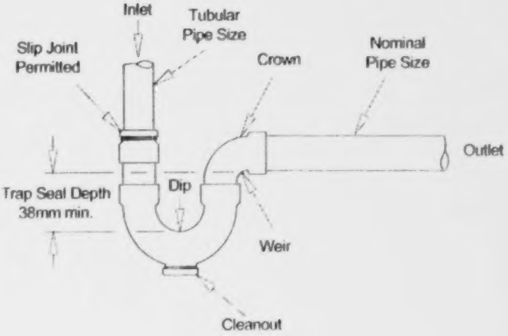
(b) Elongated Rim Contour for Water Closet Bowls

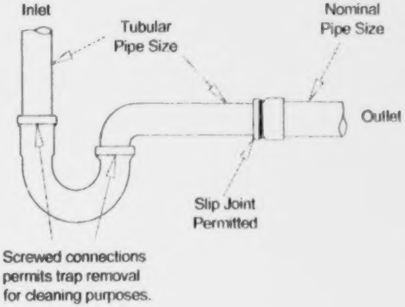

140mm
13mm
Diameter without
Countersink
470mm
356mm

A-7.2.2.6.(1) Centre Outlet Waste Fitting. Centre outlet waste fitting means a drain that is equipped with a flat metal strainer at the waste inlet of a tailpiece and it is commonly known as a grid drain.

A-7.2.3.1.(1) & (3)

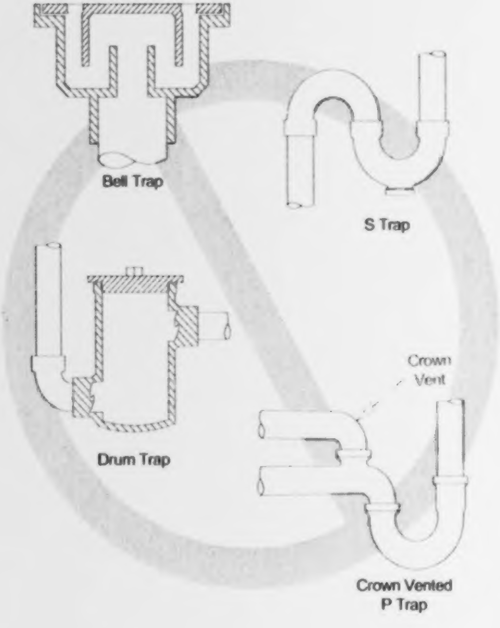
TRAP SEAL DEPTH AND TRAP CONNECTIONS


Inlet
Tubular Pipe Size
Slip Joint Permitted
Crown
Nominal Pipe Size
Outlet
Dip
Trap Seal Depth 38mm min.
Weir
Cleanout


Inlet
Tubular Pipe Size
Nominal Pipe Size
Outlet
Slip Joint Permitted
Screwed connections permits trap removal for cleaning purposes.

A-7.2.3.1.(4) & (5)

PROHIBITED TRAPS


Bell Trap
S Trap
Drum Trap
Crown
Vent
Crown Vented
P Trap

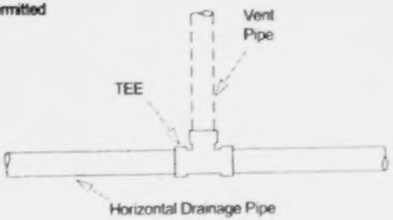
Except for a S trap standard, the S trap shown in the diagram above is prohibited by Clause 7.5.6.3.(1)(b) which limits the fall on fixture drains.

Crown vented traps shown in the diagram above are prohibitied by Clause 7.5.6.3.(1)(a) which requires that the distance from the trap weir to the vent be not less than twice the size of the fixture drain.

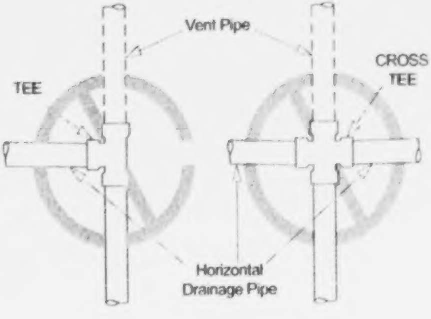
A-7.2.4.1.(1) & (2)

PIPE FITTINGS

(a) Permitted


Vent Pipe
TEE
Horizontal Drainage Pipe

(b) ***Not Permitted***

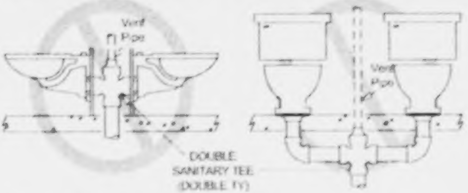

Vent Pipe
CROSS TEE
TEE
Horizontal Drainage Pipe

The use of a cross fitting is not permitted in a drainage system but such a fitting may be used in a venting system.

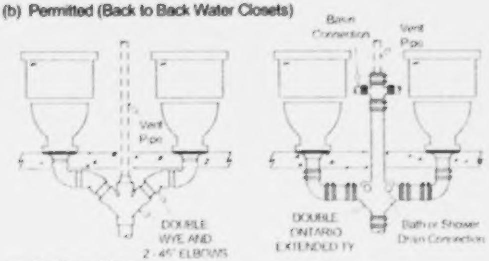
A-7.2.4.2.(1) & 7.2.4.5.(1)

PIPE FITTINGS

(a) ***Not Permitted*** (Back to Back Water Closets)


Vent Pipe
Vent Pipe
DOUBLE SANITARY TEE (DOUBLE TY)

(b) Permitted (Back to Back Water Closets)


Basin Connection
Vent Pipe
Vent Pipe
DOUBLE WYE AND 2 - 45° ELBOWS
DOUBLE ONTARIO EXTENDED TY
Bath or Shower Drain Connection

(c) ***Not Permitted***

(d) Permitted

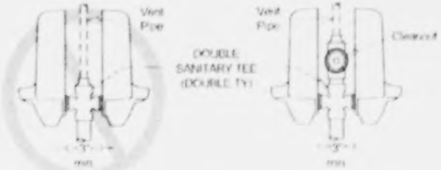

Vent Pipe
DOUBLE SANITARY TEE (DOUBLE TY)
3" min
Vent Pipe
Cleanout
3" min

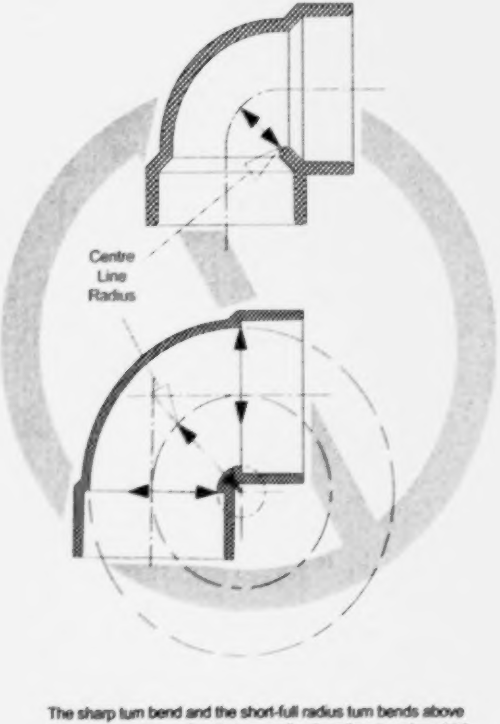
Table 7.2.4.5 (*) - A double sanitary T fitting may be used provided the vertical run is 3-inch min. and the horizontal drainage is no greater then 2-inch.

7.2.4.2 (1) - For back to back urinals be provided with a cleanout above the connection.

A-7.2.4.3.(1)

ELBOWS USED FOR DRAINAGE

(a) ***Not Permitted*** Centre line radius smaller than pipe size

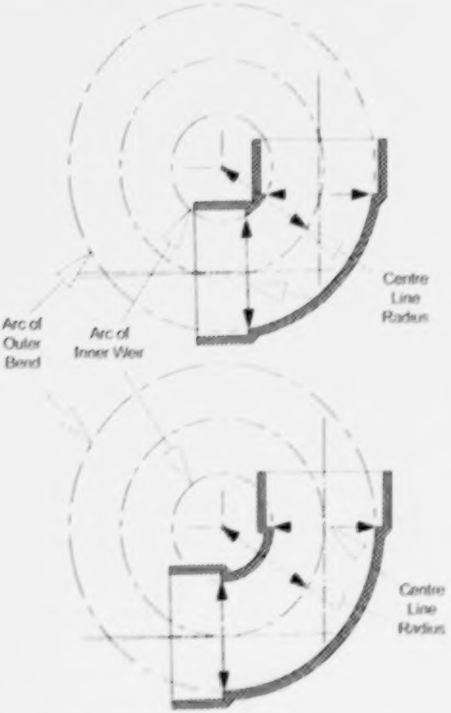


The sharp turn bend and the short-full radius turn bends above have a centre line radius that is smaller than the pipe size which is only permitted on dry vents or storm drainage systems.

A-7.2.4.3.(1)

ELBOWS USED FOR DRAINAGE

(b) Permitted centre line radius equal or larger than pipe size

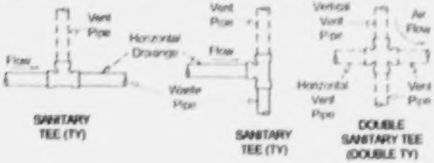

Centre
Line
Radius
Arc of
Outer
Bend
Arc of
Inner Weir
Centre
Line
Radius

The short radius bend and the full radius bend above both measure having the same centre line radius with the short turn bend intended for use in tight installations.

A-7.2.4.4.(1), 7.2.4.5.(1)

SANITARY FITTINGS IN DRAINAGE SYSTEMS

(a) Permitted (ELEVATION VIEW)


Vent
Pipe
Horizontal
Drainage
Flow
Waste
Pipe
SANITARY
TEE (TY)
Vent
Pipe
Flow
SANITARY
TEE (TY)
Vertical
Vent
Pipe
Air
Flow
Horizontal
Vent
Pipe
Vent
Pipe
DOUBLE
SANITARY TEE
(DOUBLE TY)

(b) Permitted (ELEVATION VIEW)

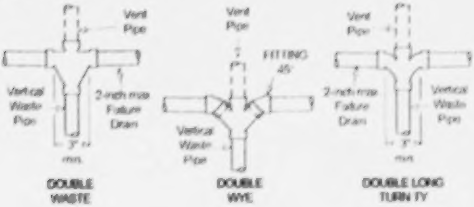
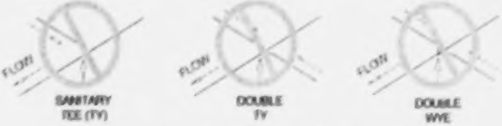

Vent
Pipe
Vertical
Waste
Pipe
2-inch max
Fixture
Drain
3" min.
DOUBLE
WASTE
Vent
Pipe
FITTING
45°
Vertical
Waste
Pipe
DOUBLE
WYE
Vent
Pipe
2-inch max
Fixture
Drain
Vertical
Waste
Pipe
3" min
DOUBLE LONG
TURN TY

Table 7.2.4.5. (*) Double Waste and Double Long Turn TY fittings require a minimum 3-inch vertical run with a maximum 2-inch branch.

(c) ***Not Permitted*** (ISOMETRIC VIEW)


FLOW
SANITARY
TEE (TY)
FLOW
DOUBLE
TY
FLOW
DOUBLE
WYE

See 7.2.4.4.(1), nominally horizontal drainage piping

A sanitary Tee fitting, a double waste, a double long turn TY or a double Wye may be used to change the direction of flow in a drainage system from horizontal to vertical, but may not be used to change the direction of flow in a nominally horizontal drainage system.

A-7.2.5.3.(3) Concrete Fittings. Concrete fittings fabricated on the site from lengths of pipe may have proven acceptable on the basis of past performances in some localities and their acceptance as an alternative solution pursuant to Section 2.1. of Division C may be warranted.

A-7.2.5.6.(1) Polyethylene Pipe Used Underground. Joints within the high-density polyethylene pipe (HDPE) shall be heat-fused according to the manufacturer's instructions. Joints between HDPE pipes and other materials shall be made with a suitable hubless coupling.

A-7.2.5.7.(1) Crosslinked Polyethylene Pipe and Fittings. There are some special installation requirements for the use of crosslinked polyethylene pipe and its associated fittings. Reference should, therefore, be made to the installation information in CAN/CSA-B137.5, "Crosslinked Polyethylene (PEX) Tubing Systems for Pressure Applications".

A-7.2.5.10. to 7.2.5.12. Solvent Cement. The CSA Standards B181.1-M, B181.2-M and B137.6 reference ASTM standard D3138, which specifies the colour of the solvent cement. PVC cement shall be grey, ABS cement shall be yellow, CPVC cement shall be clear and transition cement shall be white. The standard colour allows code users to readily determine if the correct solvent cement has been used. It should be noted that a transition cement is not an all-purpose cement.

e_1 **A-7.2.5.13.(1) Polyethylene/Aluminum/ Polyethylene Composite Pipe and Fittings.** There are some special installation requirements for the use of polyethylene/aluminum/polyethylene composite pipe and fittings. Reference should, therefore, be made to the installation information in CAN/CSA-B137.9, "Polyethylene/ Aluminum/Polyethylene (PE-AL-PE) Composite Pressure-Pipe Systems".

e_1 **A-7.2.5.14.(1) Crosslinked Polyethylene/Aluminum/ Crosslinked Polyethylene Composite Pressure Pipe and Fittings.** There are some special installation requirements for the use of crosslinked polyethylene/aluminum/crosslinked polyethylene composite pipe and fittings. Reference should, therefore, be made to the installation information in CAN/CSA-B137.10, "Crosslinked Polyethylene/ Aluminum/Crosslinked Polyethylene (PEX-AL-PEX) Composite Pressure-Pipe Systems".

A-7.2.5.15.(1) Polypropylene Pipe and Fittings. There are some special installation requirements for the use of polypropylene pipe and fittings. Reference should, therefore, be made to the installation information in CAN/CSA-B137.11-M, "Polypropylene (PP-R) Pipe and Fittings for Pressure Applications".

A-7.2.6.7.(3) Galvanized Steel Pipe. The use of galvanized steel pipe and fittings in a water distribution system may have proven acceptable on the basis of past performance in some localities and its acceptance as an alternative solution pursuant to Section 2.1. of Division C may be warranted.

A-7.2.10.16.(1) Air Admittance Valve. An air admittance valve is a device that is closed by gravity and seals the vent terminal at zero differential pressure (no flow conditions) and under positive internal pressures. The valve allows air to enter the drainage system without the use of a vent extended to outside air and prevents sewer gases from leaking into the building.

The material of the diaphragm can be damaged by exposure to acids or corrosive fumes in the ambient atmosphere; therefore, air admittance valves should not be installed in locations where there is a potential for exposure to such fumes.

A-7.3.2.6.(1) Mechanical Joints. Storm sewer blockage can cause mechanical joints at the base of leaders to fail, which can result in flooding. The failure occurs because the cleanout joints at the base of the rainwater leaders are not able to withstand the water column pressure. To avoid such failures, it is necessary to ensure that storm water systems installed using mechanical joints be braced and/or restrained at the ends of branches, changes in direction and elevation, at dead ends and at other locations as required by the manufacturer to prevent the separation of joints due to internal pressure, mechanical stress or seismic events. Care should be taken to replace cleanouts properly after maintenance or testing.

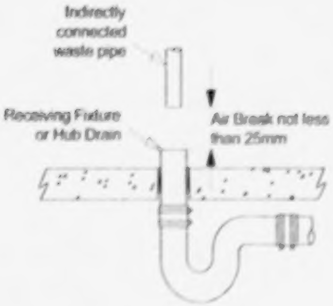
A-7.3.3.9.(1) Expansion and Contraction. Expansion and contraction in piping systems may be accommodated in a number of ways including, but not limited to, piping design and layout, material selection, and the inclusion of expansion joints.

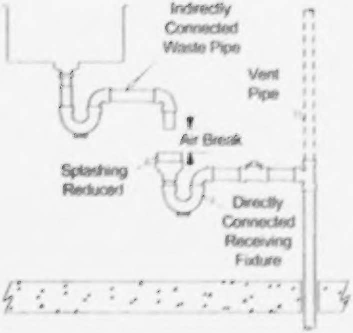
A-7.2.5. to 7.2.7.

SUMMARY OF PIPE AND FITTINGS APPLICATIONS											
Type of Piping	Standard References	Code References	Use of Piping (1)								
			Drainage System			Venting System		Potable Water System			
			Above ground	Under ground	Building sewer	Above ground	Under ground	Above ground		Under ground	
								Cold	Hot	Under building	Outside building
Asbestos-cement DWV pipe											
Type I Class 3000 sizes 8" to 24"	CAN/CGSB-34.22	7.2.5.1.(1)	P	P	P	P	P	N	N	N	N
Type II Class 4000 sizes 3" to 24"	CSA B127.1	7.2.5.1.(1)	P	P	P	P	P	N	N	N	N
Asbestos-cement sewer pipe (non-pressure)											
Classes 1500, 2400, 3000 sizes 4", 5", 6"	CAN/CGSB-34.23 or CSA B127.2	7.2.5.1.(2)	N	P	P	N	P	N	N	N	N
Classes 1500, 2400, 3300, 4000, 5000, 6000, 7000 sizes 8" to 42"	CAN/CGSB-34.9	7.2.5.1.(2)	N	P	P	N	P	N	N	N	N
Concrete sewer pipe											
Manhole Sections, catch basins and fittings	CSA Series A257-M CSA A257.4-M	7.2.5.3.	N	P(3)	P	N	N	N	N	N	N
Vitrified clay pipe	CSA A60.1-M	7.2.5.4.	N	P	P	N	P	N	N	N	N
Polyethylene water pipe	CAN/CSA-B137.1	7.2.5.5.(1) 7.2.11.2.	N	N	N	N	N	N	N	P(4)	P(4)
Polyethylene (PE) plastic pipe (SDR-PR)	ASTM F714	7.2.5.6.(1)	N	P	P	N	P	N	N	N	N
Column 1	2	3	4	5	6	7	8	9	10	11	12

A-7.3.3.11.

AIR BREAK


Indirectly connected waste pipe
Receiving Fixture or Hub Drain
Air Break not less than 25mm


Indirectly Connected Waste Pipe
Vent Pipe
Air Break
Splashing Reducer
Directly Connected Receiving Fixture

A reducer fitting or funnel is often added to the receiving fixture or hub drain to prevent splashing from the discharge into the indirect connection, therefore the air break is measured down from the bottom of the indirect waste to the top of the reducer or funnel.

A-7.3.4.6.(1) Support for Underground Horizontal Piping. Certified drain, waste and vent piping of polymeric plastic having schedule 40 dimensions shall be installed with select piping bedding where the fill over the pipe will be subject to vehicular traffic or where the burial depth exceeds eight feet.

Sewer pipe of polymeric plastic certified to a standard that requires a minimum pipe stiffness of 320 kPa shall be installed with select pipe bedding where the fill over the pipe will be subject to vehicular traffic or where the burial depth measured from the top of the pipe exceeds 750 mm.

Select pipe bedding consists of a non-cohesive ballast material of which at least 50% will pass a ¼ inch sieve and 100% will pass a ½ inch sieve, and that completely surrounds the pipe by a radial depth of at least four inches and that is sufficiently consolidated so that the intended earth loading will not produce further compaction.

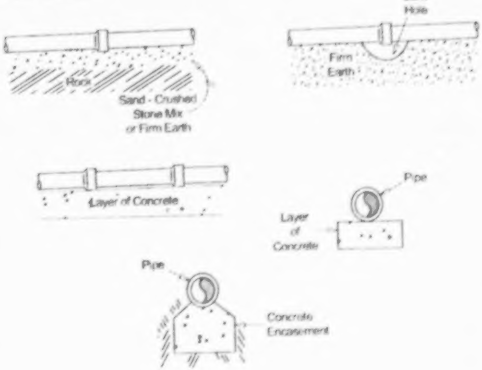
A-7.3.4.9. Thrust Blocking. Concrete thrust blocks may be used to provide restraint for underground water service piping. They are readily utilized in combination with tie rods, structural restraining, thrust collars and restrained joints. Thrust blocks are generally categorized as gravity blocks or bearing blocks.

Important factors which may affect gravity block design are pipe sizes, water pressure, density of block material and allowable soil bearing pressure that will determine the minimum size of the block base. Publications of pipe and fitting manufacturers show methods for installing thrust blocks at different fittings. In each case, the trench is cut to provide a bearing surface on undisturbed soil, and concrete is placed to fit snugly against as much of the fitting as possible without interfering with access to fitting joints. Sometimes anchor rods may be used to hold the fitting against the blocks.

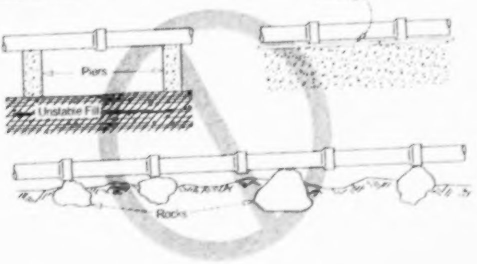
A-7.3.4.6.(1)

SUPPORT FOR UNDERGROUND PIPING

(a) Permitted


Joint
Hole
Rock
Sand - Crushed
Stone Mix
or Firm Earth
Firm
Earth
Layer of Concrete
Pipe
Layer
of
Concrete
Pipe
Concrete
Encasement

(b) *Not Permitted*


Planking
Piers
Unstable Fill
Rocks

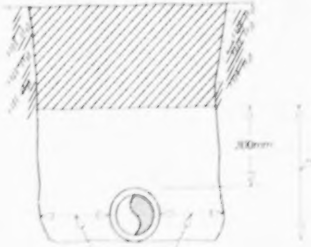
See explanation for Subsection 7.3.5. for additional protection required for underground piping. Permitted installations are shown in diagram (a). The methods of support shown in diagram (b) are not permitted because the base does not provide firm and continuous support for the piping.

A-7.3.5.1.(1) Backfilling of Pipe Trench. Stronger pipes may be required in deep fill or under driveways, parking lots, etc., and compaction for the full depth of the trench may be necessary.

Bedding is required primarily to provide uniform and adequate longitudinal support under the pipe. All drainage pipe shall be supported in such a manner as to maintain its alignment, and prevent sagging. Blocking alone shall not be used to maintain pipe grading. Bell holes at each joint shall be provided to permit the joint to be assembled properly while maintaining uniform pipe support. A compacted depth of 100 mm to 150 mm is generally sufficient bedding thickness. Ledge or sharp rocks and clods which could damage the pipe cannot be used. In general, select pipe bedding shall consist of a non-cohesive ballast material of which at least 50% will pass a 1/4" sieve and 100% will pass a 1/2" sieve, and the completely surround the pipe by a radial depth of at least 100 mm and that is sufficiently consolidated so that the intended earth loading will not produce further compaction. Other materials can be used if authorized by the pipe manufacturers.

A-7.3.5.1.

BACKFILLING OF PIPE TRENCH



Backfill in this part of the trench must be carefully placed and tamped.
It must not contain STONES, BOULDERS, CINDERS or FROZEN EARTH

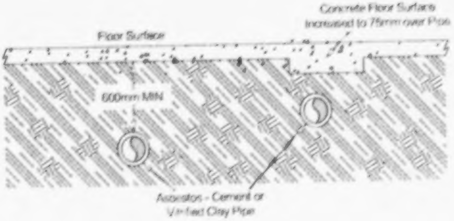
This part of the trench should be as narrow as proper jointing and backfill will permit.

Careful selection of piping may be necessary in deep fill or under driveways, parking lots, etc., and compation for the full depth of the trench may be necessary.

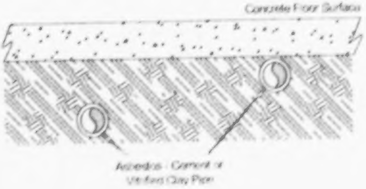
A-7.3.5.2.

PROTECTION OF UNDERGROUND NON-METALLIC PIPES

(a) Concrete floors less than 75 mm thick


Concrete Floor Surface
Increased to 75mm over Pipe
Floor Surface
600mm MIN
Asbestos - Cement or
Vitrified Clay Pipe

(b) Concrete floors 75 mm thick or more - no protection required.


Concrete Floor Surface
Asbestos - Cement or
Vitrified Clay Pipe

A-7.3.5.4.(1) Freeze Protection.

Piping Exposed to Freezing

No water, soil, or waste pipes shall be installed on the exterior of a building or in the uninsulated side of an exterior wall, or in any place where they may be subjected to freezing temperatures, unless adequate provision is made to protect such pipes from freezing (such as applying trace wires or insulation).

Insulation of Buried Piping

Failures in buried pipe are caused by improper installation, corrosion, poor design, soil movement caused by freeze-thaw situations, to name some of the causes. Designing for frost protection is a consideration in Ontario because all regions experience winter conditions, where temperatures drop below freezing, and it is impractical to bury piping below the depth of frost penetration, insulation may be used to protect the pipe from freezing temperatures.

There are two methods available:

(1) insulation is formed to fit around and encapsulate the pipe, or
(2) a sheet of insulation at some level above the buried pipe.

The type of backfill that is used to bury pipe is most important because this determines how the frost will pass through the backfill and penetrate the buried pipe.

Typical Water Pipe Protection By Horizontal Insulation

The width of a sheet of insulation may be calculated using the following formula:

Width of Insulation:

$$W = D + 2(F-X) - 0.3$$

Where:
W = Width of Insulation (m)
D = Outside Diameter of Pipe (m)
X = Insulation Depth (m)
F = Estimated Frost Depth (m)

SUMMARY OF PIPE AND FITTINGS APPLICATIONS											
Type of Piping	Standard References	Code References	Use of Piping (1)								
			Drainage System			Venting System		Potable Water System			
			Above ground	Under ground	Building sewer	Above ground	Under ground	Above ground		Under ground	
								Cold	Hot	Under building	Outside building
Poly (vinyl chloride) (PVC) pressure fittings	CAN/CSA-B137.2	7.2.5.8. 7.2.11.2.	N	N	P	N	N	P(5)(6)	N	P	P
Poly (vinyl chloride) (PVC) water pipe	CAN/CSA-B137.3	7.2.5.8. 7.2.11.2.	N	N	P	N	N	P	N	P(7)	P(7)
Cross linked polyethylene tubing (PEX)	CAN/CSA-B137.5	7.2.5.7.(1) 7.2.11.2.	N	N	N	N	N	P(5)(6)	P(5)(6)	P	P
Chlorinated poly (vinyl chloride) CPVC water pipe	CAN/CSA B137.6	7.2.5.9.	N	N	N	N	N	P(5)(6)(8)	P (5)(6)(8)	P(8)	P(8)
Polybutylene water service pipe	CAN/CSA-B137.7	7.2.11.2.	N	N	N	N	N	P(7)	N	P(4)	P(4)
Plastic sewer pipe PS ≥ 320 kPa	CAN/CSA-B182.1	7.2.5.10. 7.2.5.12.	N	P	P	N	N	N	N	N	N
Acrylonitrile butadiene styrene (ABS) DWV pipe	CAN/CSA-B181.1	7.2.5.10. 7.2.5.12.	P(5)(6)	P	P	P(5)(6)	P	N	N	N	N
Polyvinyl chloride (PVC) DWV pipe	CAN/CSA-B181.2	7.2.5.10. 7.2.5.12.	P(5)(6)	P	P	P(5)(6)	P	N	N	N	N
PVC sewer pipe (PSM type) ≤ 35-SDR	CAN/CSA-B182.2	7.2.5.10. 7.2.5.12.	N	P	P	N	P	N	N	N	N
Profile Polyvinyl chloride (PVC) sewer pipe PS ≥ 320 kPa	CAN/CSA-B182.4	7.2.5.10.	N	P	P	N	P	N	N	N	N
Profile polyethylene sewer pipe PS ≥ 320 kPa	CAN/CSA-B182.6	7.2.5.10.	N	P	P	N	P	N	N	N	N
Column 1	2	3	4	5	6	7	8	9	10	11	12

SUMMARY OF PIPE AND FITTINGS APPLICATIONS

Type of Piping	Standard References	Code References	Use of Piping (1)								
			Drainage System			Venting System		Potable Water System			
								Above ground		Under ground	
			Above ground	Under ground	Building sewer	Above ground	Under ground	Cold	Hot	Under building	Outside building
Polyolefin laboratory drainage systems	CAN/CSA-B181.3	7.2.8.1.(1)	P(5)(6)	P	P	P(5)(6)	P	N	N	N	N
Polyethylene/ Aluminum/ Polyethylene (PE/AL/PE) pressure pipe	CAN/CSA-B137.9	7.2.5.13. 7.2.11.2.	N	N	N	N	N	P(5)(6)	N	P	P
Crosslinked Polyethylene Aluminum/Crosslinked Polyethylene (PEX/AL/PEX) pressure pipe	CAN/CSA-B137.10	7.2.5.14. 7.2.11.2.	N	N	N	N	N	P(5)(6)	P(5)(6)	P	P
Polypropylene (PP-R) pressure pipe	CAN/CSA-B137.11	7.2.5.15.	N	N	N	N	N	P(5)(6)	P(5)(6)	P	P
Cast iron soil pipe	CAN/CSA-B70	7.2.6.1.	P	P	P	P	P	N	N	N	N
Cast iron water pipe	ANSI/AWWA C151/ A21.51 (Ductile Iron)	7.2.6.4. 7.2.11.2.	P	P	P	P	P	P	P	P	P
Cast iron fittings	ANSI/AWWA C110/ A21.10 (Ductile or Gray Iron)	7.2.6.4. 7.2.11.2.	N	N	N	N	N	P	P	P	P
Cast iron screwed fittings	ANSI/ASME B16.4 (Cast Iron)	7.2.6.5. 7.2.11.2.	N	N	N	N	N	P	P	P	P
	ANSI/ASME B16.3 (Malleable Iron)	7.2.6.6.	N	N	N	N	N	P	P	P	P
Welded and seamless steel galvanized pipe	ASTM-A53	7.2.6.7.	P	N	N	P	N	P(9)	P(9)	P(9)	P(9)
Column 1	2	3	4	5	6	7	8	9	10	11	12

SUMMARY OF PIPE AND FITTINGS APPLICATIONS

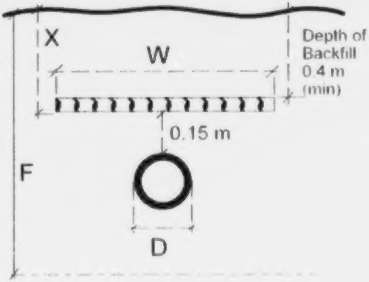
Type of Piping	Standard References	Code References	Use of Piping (1)								
			Drainage System			Venting System		Potable Water System			
								Above ground		Under ground	
			Above ground	Under ground	Building sewer	Above ground	Under ground	Cold	Hot	Under building	Outside building
Corrugated steel pipe	CAN/CSA-G401	7.2.6.8.	N	N	P(10)	N	N	N	N	N	N
Sheet metal piping (11)	—	7.2.6.9.	N	N	N	N	N	N	N	N	N
Copper and brass pipe	ASTM B42 (Copper)	7.2.7.1.	P	P	P	P	P	P	P	P	P
	ASTM B43 (red brass)	7.2.7.1.	P	P	P	P	P	P	P	P	P
	ANSI/ASME B16.24	7.2.7.2.	P	P	P	P	P	P	P	P	P
Brass or bronze threaded water fittings	ANSI/ASME B16.15	7.2.7.3.	N	N	N	N	N	P	P	P	P
Copper tube Type K and L hard	ASTM B88	7.2.7.4.	P	P	P	P	P	P	P	N	N
Type K soft	ASTM B88	7.2.7.4. 7.2.11.2.	N	N	N	N	N	P	P	P	P
Type L soft	ASTM B88	7.2.7.4.	N	N	N	N	N	P	P	P	P
Type M hard	ASTM B88	7.2.7.4.	P	N	N	P	N	P	P	N	N
Type M soft	ASTM B88	7.2.7.4.	N	N	N	N	N	N	N	N	N
Type DWV	ASTM B306	7.2.7.4.	P(12)	N	N	P(12)	N	N	N	N	N
Column 1	2	3	4	5	6	7	8	9	10	11	12

SUMMARY OF PIPE AND FITTINGS APPLICATIONS											
Type of Piping	Standard References	Code References	Use of Piping (1)								
			Drainage System			Venting System		Potable Water System			
			Above ground	Under ground	Building sewer	Above ground	Under ground	Above ground		Under ground	
								Cold	Hot	Under building	Outside building
Solder-joint drainage fittings	ANSI/ASME B16.23 ANSI/ASME B16.29	7.2.7.5.	P	P	P	P	P	N	N	N	N
Solder-joint water fittings	ANSI/ASME B16.18 ANSI/ASME B16.22	7.2.7.6.	N	N	N	P	P	P	P	P	P
Column 1	2	3	4	5	6	7	8	9	10	11	12

Notes to Table:

N – Not permitted, P – Permitted.
(1) Where fire separation is pierced by pipes, the integrity of the fire separation must be maintained with fire stops.
(2) Cold water only.
(3) Gasketted joints required.
(4) Permitted only for water service pipe.
(5) Combustible piping in noncombustible construction is subject to the requirements of Article 3.1.5.16. of Division B of the Building Code.
(6) Combustible piping that penetrates a fire separation is subject to the requirements in Articles 3.1.9.4. and 9.10.9.7. of Division B of the Building Code.
(7) Not permitted in hot water systems.
(8) Not to exceed design temperature and design pressure in Sentence 7.2.5.9.(2).
(9) Permitted only in areas of industrial occupancy as described in Division B of the Building Code.
(10) Permitted underground only in a storm drainage system.
(11) Permitted only for an external leader.
(12) Not permitted for the fixture drain or vent below the flood level rim of a flush-valve-operated urinal.

CAN1 - CAN/CGA; CAN2 - CAN/CGSB; CAN3 - CAN/CSA; CAN4 - CAN/ULC;
See Table 1.3.2.1., Part 1 of Division B of the Building Code.



Having calculated the width of the insulation, the thickness can be found on a chart, similar to the one shown below.

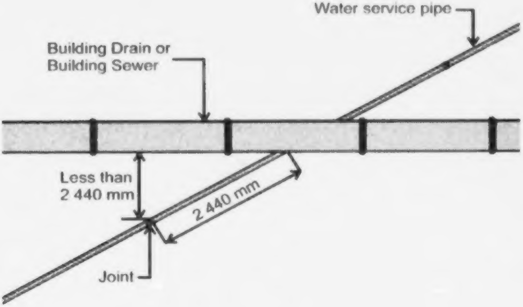
THICKNESS OF FOAM INSULATION (mm)								
Amount of Backfill over the Insulation (m)		Design Freezing Index (°C-Days)						
		850	1125	1400	1675	1950	2225	2500
	0.6	50	65	75	90	100	115	125
	0.9	40	50	65	75	90	100	115
	1.2	25	40	50	65	75	90	100
	1.5	25	25	40	50	65	75	90
	1.8	25	25	25	40	50	65	75
	2.1			25	25	40	50	65
	2.4				25	25	40	50
	2.7					25	25	40
	3.0						25	25

a₃ **A-7.3.5.7. Spatial Separation.** The provisions of this Article are intended to limit the probability that failure of an in-ground building drain or building sewer would lead to the contamination of potable water in a water service pipe.

Sentence (1) requires that a minimum 2440 mm horizontal clearance be provided between a water service pipe and a building drain or a building sewer.

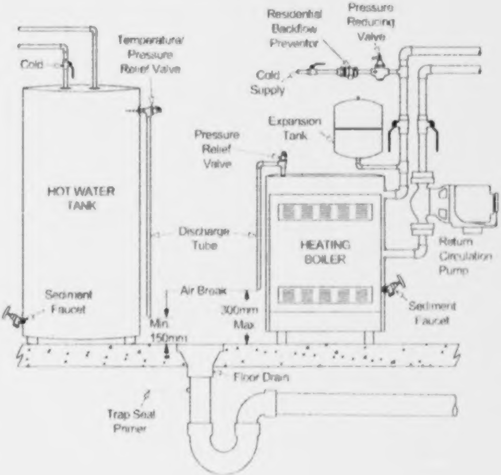
Sentence (2) describes certain exceptions which would permit the water service pipe to be closer than 2440 mm to the building drain or building sewer.

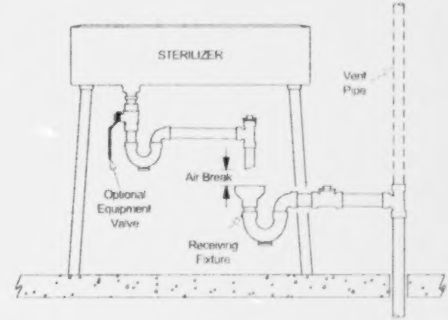
Sentence (3) recognizes that in certain instances, the water service pipe and a building drain or building sewer may have to cross each other. In this case, the greatest risk of contamination to the potable water is through joints in the water service pipe under backflow conditions. In order to avoid this, the Code requires that there be no joints in the water service pipe within 2440 mm horizontally of the intersection with the building drain or building sewer. The illustration below appears to meet this requirement, however it is intended that no joints in the water service line be located within 2440 mm of the closest point on the building drain/sewer.



A-7.4.2.1.

CONNECTION TO DRAINAGE SYSTEM

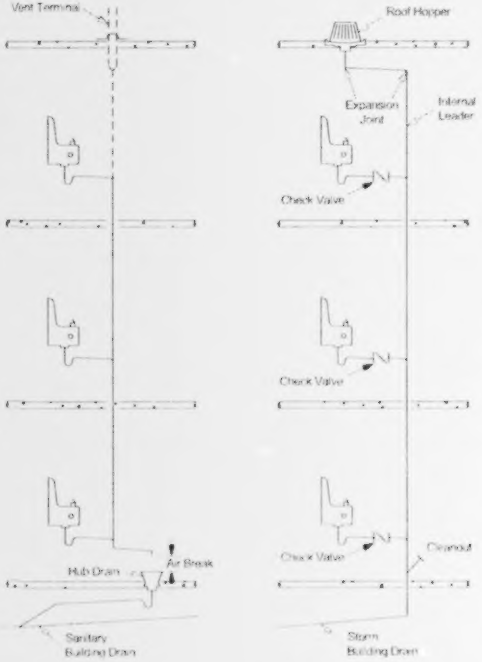

Residential Backflow Preventor
Pressure Reducing Valve
Temperature/ Pressure Relief Valve
Cold
Cold Supply
Expansion Tank
Pressure Relief Valve
HOT WATER TANK
Discharge Tube
HEATING BOILER
Return Circulation Pump
Air Break
Sediment Faucet
Min 150mm
300mm Max
Sediment Faucet
Floor Drain
Trap Seal Primer


STERILIZER
Vent Pipe
Air Break
Optional Equipment Valve
Receiving Fixture

A-7.4.2.1.(1)

CONNECTION TO DRAINAGE SYSTEM

Drinking Fountains

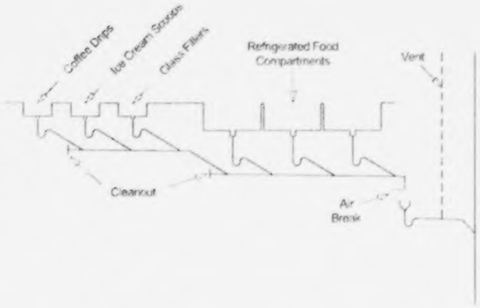

Vent Terminal
Roof Hopper
Expansion Joint
Internal Leader
Check Valve
Check Valve
Check Valve
Cleanout
Air Break
Hub Drain
Sanitary Building Drain
Storm Building Drain

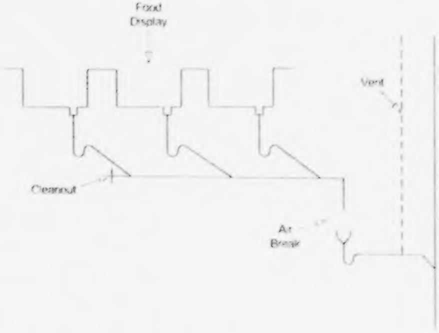
7.4.2.1.(1)(a)(i) - Drinking fountains may serve as a trap seal primer following requirements in 7.4.2.3.

7.4.2.1.(1)(a)(ii) - Drinking fountains may connect to a internal leader provided check valves are installed after the protecting trap.

A-7.4.2.1.(1)

CONNECTION TO DRAINAGE SYSTEM


Coffee Drips
Ice Cream Scoops
Glass Fillers
Refrigerated Food Compartments
Vent
Cleanout
Air Break

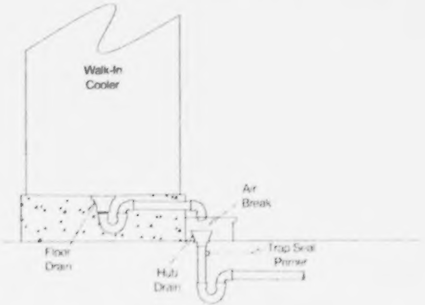

Food Display
Vent
Cleanout
Air Break

A-7.4.2.1.

CONNECTION TO DRAINAGE SYSTEM

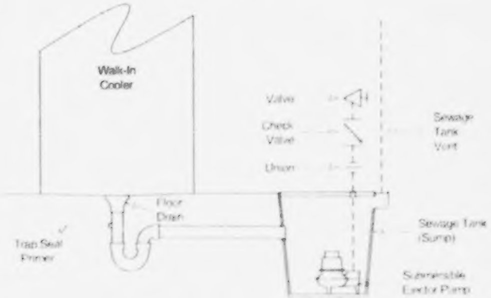
(a) A Walk-in Cooler discharging over a Hub Drain.

INDIRECTLY CONNECTED


Walk-In
Cooler
Air
Break
Floor
Drain
Hub
Drain
Trap Seal
Primer

(b) A Walk-in Cooler discharging into a Sewage Ejector -

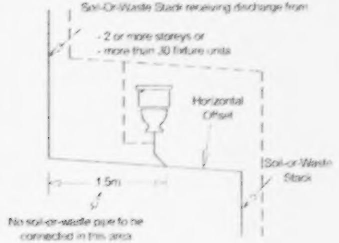
NOT DIRECTLY CONNECTED


Walk-In
Cooler
Valve
Check
Valve
Union
Sewage
Tank
Vent
Floor
Drain
Sewage Tank
(Sump)
Trap Seal
Primer
Submersible
Ejector Pump

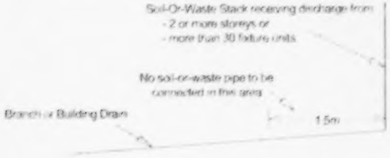
A-7.4.2.1.(2)

SOIL OR WASTE PIPE CONNECTIONS

(a) Connection to nominally horizontal offset

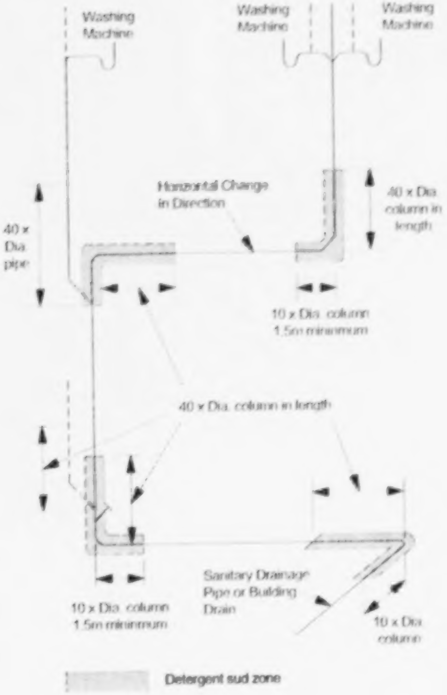

Soil-Or-Waste Stack receiving discharge from
- 2 or more storeys or
- more than 30 fixture units
Horizontal Offset
Soil-or-Waste Stack
1.5m
No soil-or-waste pipe to be connected in this area

(b) Connection to nominally horizontal soil or waste pipe


Soil-Or-Waste Stack receiving discharge from
- 2 or more storeys or
- more than 30 fixture units
No soil-or-waste pipe to be connected in this area
Branch or Building Drain
1.5m

A-7.4.2.1.(4)

SUD ZONES BY CREATED BY MORE THAN ONE WASHING MACHINE


Washing Machine
Washing Machine
Washing Machine
Horizontal Change in Direction
40 x Dia pipe
40 x Dia column in length
10 x Dia. column 1.5m minimum
40 x Dia. column in length
10 x Dia. column 1.5m minimum
Sanitary Drainage Pipe or Building Drain
10 x Dia column
Detergent sud zone

A-7.4.2.1.(4) Suds Pressure Zones. High sudsing detergents used in clothes washers produce suds that tend to disrupt the venting system and can also spread through the lower portions of a multi-storey drainage system. The more turbulence, the greater the suds. One solution that avoids the creation of suds pressure zones involves connecting the suds-producing stack downstream of all other stacks and increasing the size of the horizontal building drain to achieve a greater flow of air and water. Using streamlined fittings, such as wyes, tends to reduce suds formation. Check valves or backwater valves in fixture outlet pipes have also been used to correct problem installations.

A-7.4.3.3.(1) Waste with Organic Solids. Equipment such as garbage grinders and potato peelers produces waste with organic solids. These devices reduce most waste into small particles that will flow easily through the drainage system. However, if they are located upstream of the interceptor, the particles could block the interceptor.

A-7.4.4.2.(1) Protection for Drainage System. When the temperature of the heated discharge exceeds 75°C, the material being used shall be used in accordance with the manufacturers approval and done in accordance with the manufacturers instructions. Where the material being used is a thermoplastic care should be taken with discharges above 55°C.

A-7.4.4.3. Grease Interceptors. For large volume engineered interceptors, the drain down time may vary. Information on the design and sizing of grease interceptors can be found in *ASPE Data Book*, Volume 4, Chapter 8, "Grease Interceptors".

A-7.4.4.4.(1) Bio-hazardous Waste. Chemically loaded and bio-hazardous wastes can be dangerous to private and public sewer systems and hazardous to people. The treatments of corrosive and acid waste is mandated by this Code.

The treatment of chemically loaded effluents is usually regulated by sewage collecting and treatment authorities. The treatment of bio-hazardous waste should follow good engineering practice, such as that described in the Laboratory Biosafety Guidelines published by Health Canada.
Bio-hazardous waste disposal systems require specific engineering expertise and remain outside the scope of this Code.

A-7.4.4.3.(8)

Grease Interceptor's Flow Rate (L/s) for 60 Seconds Drain Down Time (ddt)
Forming Part of Sentence 7.4.4.3.(8)

Fixture Volume in Litre(s)	Column A	Column B Column A x 10	Column C Column A x 100	Column D Column A x 1000
1	0.0125	0.125	1.25	12.5
2	0.0250	0.250	2.50	25.0
3	0.0375	0.375	3.75	37.5
4	0.0500	0.500	5.00	50.0
5	0.6250	0.625	6.25	62.5
6	0.0750	0.750	7.50	75.0
7	0.0875	0.875	8.75	87.5
8	0.1000	1.000	10.00	100.0
9	0.1125	1.125	11.25	112.5
10	0.1250	1.250	12.50	125.0

To calculate the grease interceptor's flow rate, summarize all fixtures volume and add the pumped discharge (L/s), if any. For 120 seconds drain down time, divide summarized flow rated by 2 and add pumped discharge (L/s), if any.

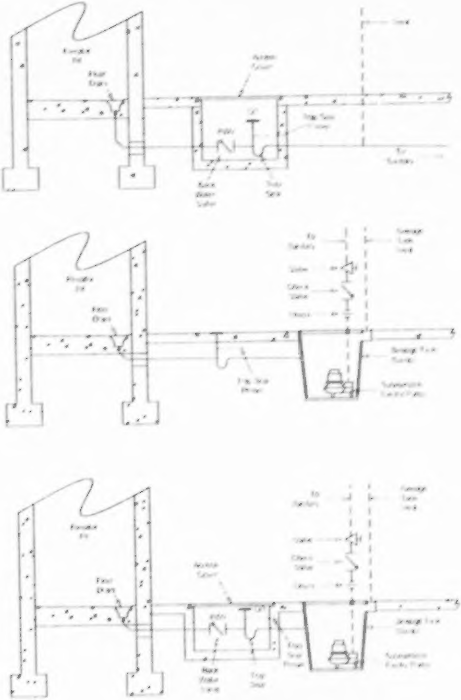
Sample: Fixture #1, 1200 mm x 600 mm x 450 mm = 324,000,000 mm^3 or 324 litres
Fixture #2, 1600 mm x 800 mm x 500 mm = 640,000,000 mm^3 or 640 litres

Flow rate for 60 seconds drain down time, zero pumped discharge;
Fixture #1, 3.75 + 0.25 + 0.05 = 4.05 L/s
Fixture #2, 7.5 + 0.5 = 8 L/s
Total flow rate: 12.05 L/s

Total flow rate for 120 seconds (2 min) drain down time:
12.05 / 2 = 6.025 L/s.

A-7.4.4.3.(3)

FLOOR DRIAN IN ELEVATOR PITS

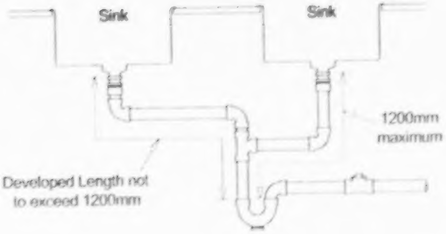

Elevator Pit
Floor Drain
Access Cover
CO
BWV
Trap Seal Primer
Vent
To Sanitary
Back Water Valve
Trap Seal
To Sanitary
Sewage Tank Vent
Valve
Check Valve
Union
Elevator Pit
Floor Drain
Trap Seal Primer
Sewage Tank Cover
Submersible Sump Pump
To Sanitary
Sewage Tank Vent
Valve
Check Valve
Union
Elevator Pit
Floor Drain
Access Cover
BWV
CO
Trap Seal Primer
Sewage Tank Cover
Submersible Sump Pump
Back Water Valve
Trap Seal

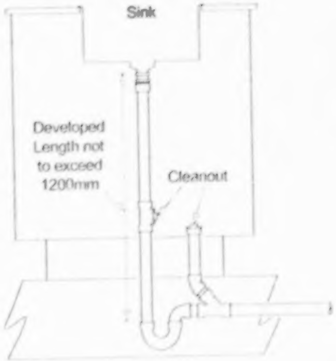
Allowable connection to elevator pit's floor drain (FD) with or without sump pit. Oil interceptor not required as per 7.4.4.3.(3).

If a floor drain is provided in an elevator pit, it shall be installed in accordance with ASME A17.1/CSA-B44, "Safety Code for Elevators and Escalators". See Article 7.4.3.6. of the Code.

A - 7.4.5.1.(2)

TRAPPING OF SINKS AND LAUNDRY TRAYS


Sink
Sink
1200mm maximum
Developed Length not to exceed 1200mm

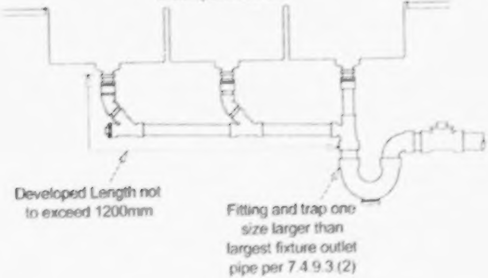

Sink
Developed Length not to exceed 1200mm
Cleanout

See Article 7.4.8.2. on developed length restrictions.

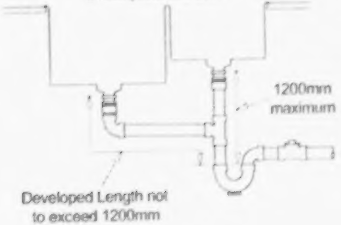
A-7.4.5.1.(2)

TRAPPING OF SINKS AND LAUNDRY TRAYS

3 Compartment Sink


Developed Length not to exceed 1200mm
Fitting and trap one size larger than largest fixture outlet pipe per 7.4.9.3.(2)

2 Compartment Sink

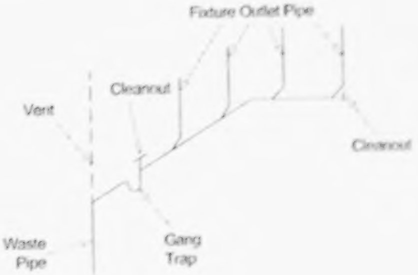

1200mm maximum
Developed Length not to exceed 1200mm

See Article 7.4.8.2. on developed length restrictions.

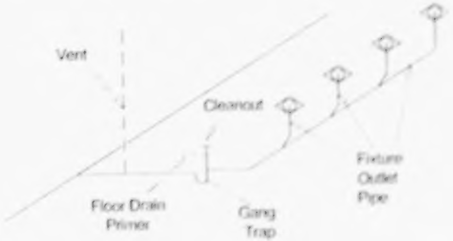
A-7.4.5.1.(3)

SINGLE TRAPS FOR FIXTURE GROUPS

(a) Laboratory sinks or washing machines


Fixture Outlet Pipe
Cleanout
Vent
Cleanout
Waste Pipe
Gang Trap

(b) Floor drains or shower drains

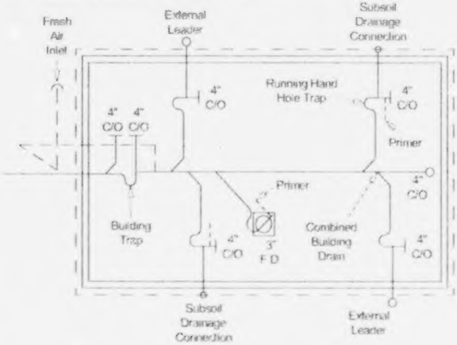

Vent
Cleanout
Fixture Outlet Pipe
Floor Drain Primer
Gang Trap

Venting is not required for floor drains if the installation conforms to Sentence 7.5.1.1.(3)

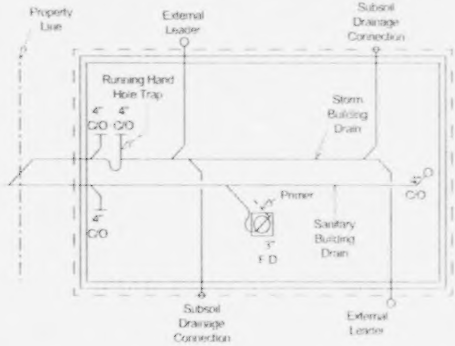
A-7.4.5.3.

SUBSOIL DRAINAGE CONNECTION

(a) Connections to sanitary drainage system - Combined System


Fresh Air Inlet
External Leader
Subsoil Drainage Connection
4" C/O
Running Hand Hole Trap
4" C/O
4" C/O
4" C/O
Primer
4" C/O
Primer
Building Trap
4" C/O
3" F D
Combined Building Drain
4" C/O
Subsoil Drainage Connection
External Leader

(b) Connections to sanitary drainage system - Semi-Combined System

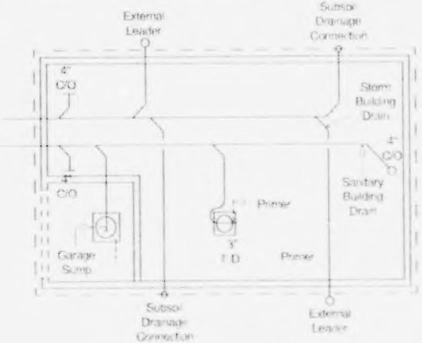

Property Line
External Leader
Subsoil Drainage Connection
Running Hand Hole Trap
4" C/O
4" C/O
Storm Building Drain
4" C/O
Primer
4" C/O
3" F D
Sanitary Building Drain
Subsoil Drainage Connection
External Leader

See 7.1.5.1.(2). A combined building drain or a combined building sewer shall not be installed.

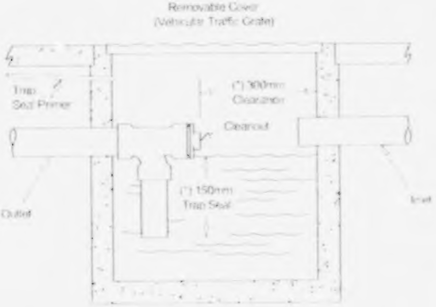
A-7.4.5.3.

SUBSOIL DRAINAGE CONNECTION

(c) Connections to storm drainage system - Separate System


External Leader
Subsoil Drainage Connection
4" C/O
Storm Building Drain
4" C/O
Sanitary Building Drain
C/O
Primer
Garage Sump
3" F.D
Primer
Subsoil Drainage Connection
External Leader

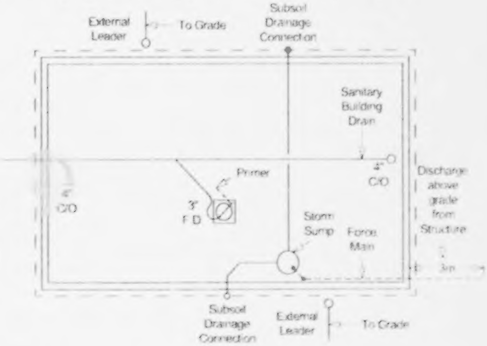
(d) Trapped sump (Garage sump)


Removable Cover (Vehicular Traffic Grate)
Trap Seal Primer
(*) 300mm Clearance
Cleanout
(*) 150mm Trap Seal
Outlet
Inlet

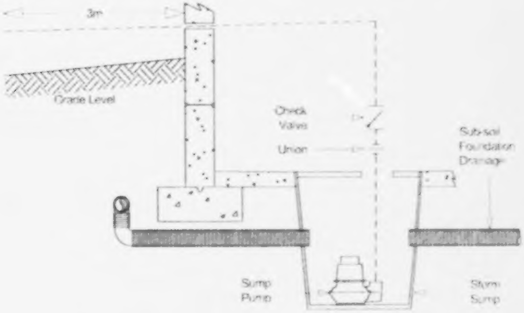
A-7.4.5.3.

SUBSOIL DRAINAGE CONNECTION

(e) Discharging subsoil drainage above grade - Separate System


External Leader
To Grade
Subsoil Drainage Connection
Sanitary Building Drain
4" C/O
Primer
4" C/O
3" F.D
Discharge above grade from Structure
Storm Sump
Force Main
3m
Subsoil Drainage Connection
External Leader
To Grade

(f) Discharging subsoil drainage above grade - Separate System

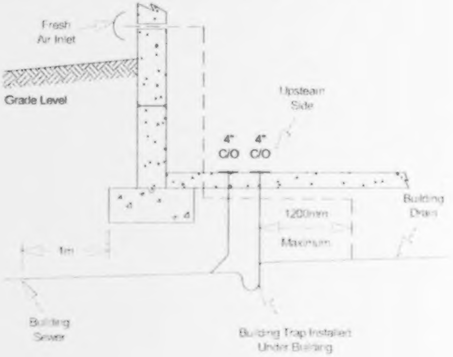

3m
Grade Level
Check Valve
Union
Sub-soil Foundation Drainage
Sump Pump
Storm Sump

When no storm drain in available or is not allowed, the foundation drainage much discharge above grade at least 3 m from the building and must not cause a hazard.

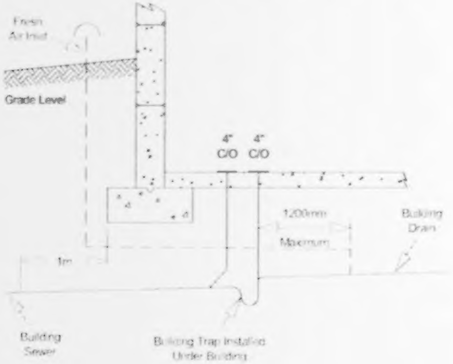
A-7.4.5.4.

LOCATION OF BUILDING TRAP

(a) Permitted - Fresh air inlet inside building to exterior


Fresh Air Inlet
Grade Level
Upsteam Side
4" C/O
4" C/O
Building Drain
1200mm Maximum
1m
Building Sewer
Building Trap Installed Under Building

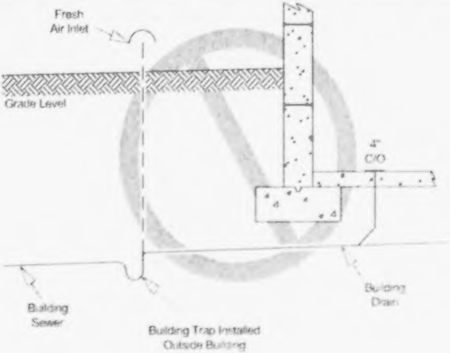
(b) Permitted - Fresh air inlet under building up to grade


Fresh Air Inlet
Grade Level
4" C/O
4" C/O
1200mm Maximum
Building Drain
1m
Building Sewer
Building Trap Installed Under Building

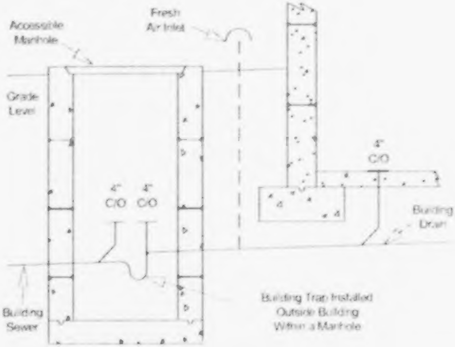
A-7.4.5.4.(1)(c)(ii)

LOCATION OF BUILDING TRAP

(a) ***Not Permitted*** - Building trap outside building with fresh air inlet/cleanout


Fresh
Air Inlet
Grade Level
4"
C/O
Building
Drain
Building
Sewer
Building Trap Installed
Outside Building

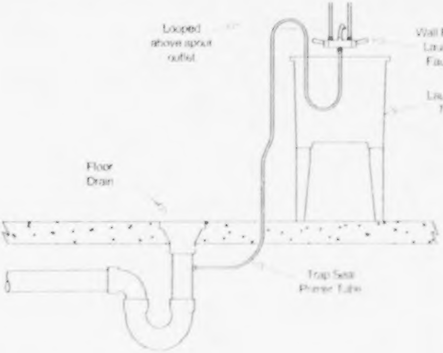
(b) Permitted - Building trap within a manhole


Accessible
Manhole
Fresh
Air Inlet
Grade
Level
4"
C/O
4"
C/O
4"
C/O
Building
Drain
Building
Sewer
Building Trap Installed
Outside Building
Within a Manhole

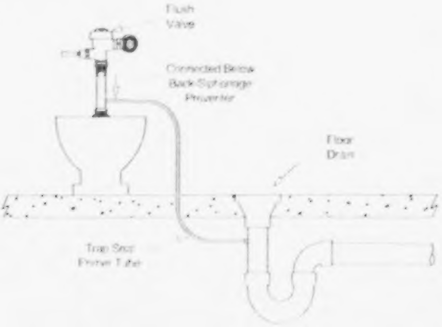
A-7.4.5.5.(1)

MAINTAINING TRAP SEALS

(a) Laundry tub faucet


Looped above spout outlet
Wall Mount Laundry Faucet
Laundry Tub
Floor Drain
Trap Seal Primer Tube

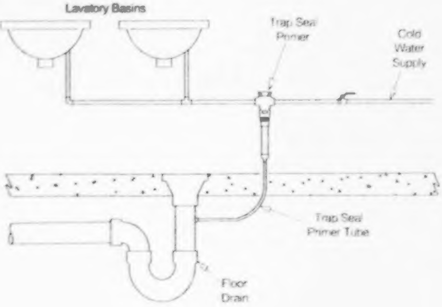
(b) Flush valve


Flush Valve
Connected Below Back-Siphonage Preventer
Floor Drain
Trap Seal Primer Tube

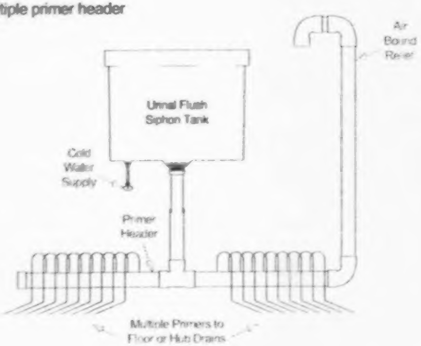
A-7.4.5.5.(1)

MAINTAINING TRAP SEALS

(c) Supply line trap seal primer


Lavatory Basins
Trap Seal Primer
Cold Water Supply
Trap Seal Primer Tube
Floor Drain

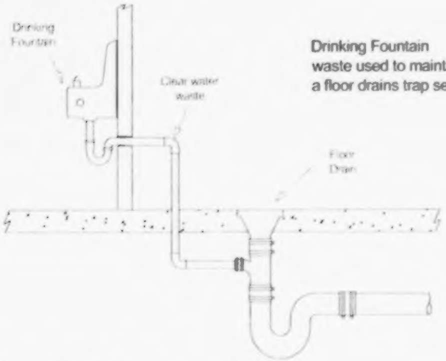
(d) Multiple primer header


Air Bound Relief
Urinal Flush Siphon Tank
Cold Water Supply
Primer Header
Multiple Primers to Floor or Hub Drains

A-7.4.5.5.(1)

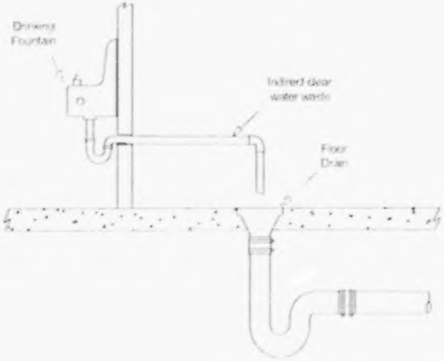
MAINTAINING TRAP SEALS

(e) Clear water waste


Drinking Fountain
Clear water waste
Floor Drain

Drinking Fountain waste used to maintain a floor drains trap seal

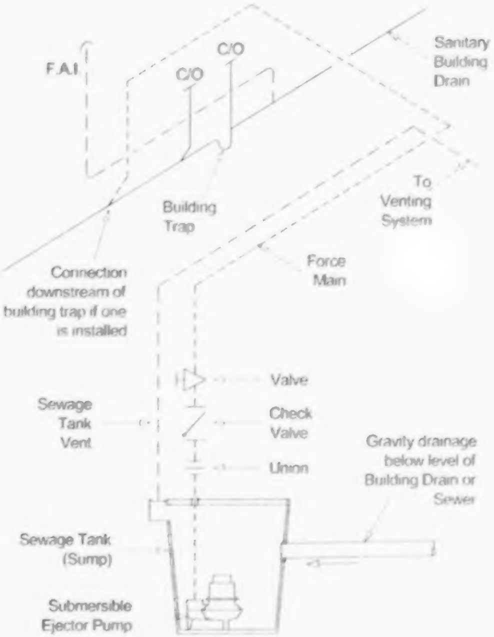
(f) Indirect clear water waste


Drinking Fountain
Indirect clear water waste
Floor Drain

A-7.4.6.3. Arrangement of Piping at Sewage Sump. In most installations controls will be installed in conjuction with a float to automatically empty the sump. If such controls are not provided, the capacity of the sump should equal the maximum inflow to the sump that is expected to occur during any 24 hour period.

A-7.4.6.3.(1) to (7)

ARRANGEMENT OF PIPING AT SUMP


F.A.I.
C/O
C/O
Sanitary Building Drain
To Venting System
Building Trap
Connection downstream of building trap if one is installed
Force Main
Valve
Sewage Tank Vent
Check Valve
Union
Gravity drainage below level of Building Drain or Sewer
Sewage Tank (Sump)
Submersible Ejector Pump

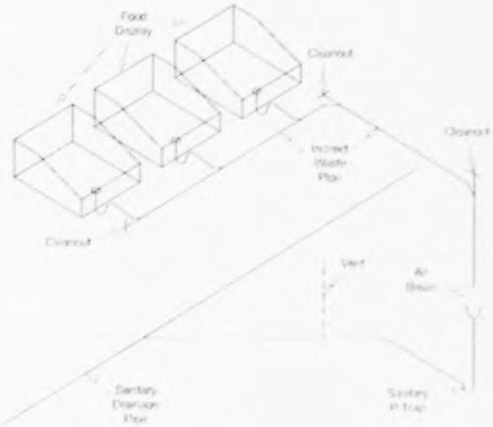
Where a sump or tank receives sewage it shall be water tight, air tight and shall be vented.

A-7.4.6.4.(5) Protection from Backflow Caused by Surcharge. These requirements are intended to apply when in the opinion of the local authority having jurisdiction there is danger of backup from a public sewer.

A-7.4.7.1.(6) Cleanouts for Fixture Drains. A trap cleanout plug is not acceptable as a cleanout for the fixture drain; hence: either a separate cleanout or a trap with a removable trap dip must be installed.

A-7.4.7.1.(9)

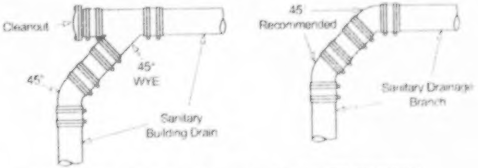
CLEANOUTS FOR FOOD DISPLAY DRIP PIPES


Food Display
Cleanout
Indirect Waste Pipe
Cleanout
Cleanout
Vent
Air Break
Sanitary Drainage Pipe
Sanitary P-Trap

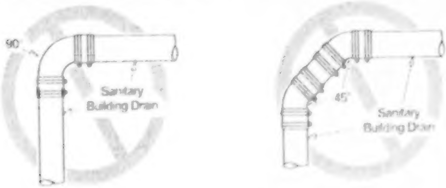
A-7.4.7.4.

CLEANOUT CONNECTIONS

(a) Permitted - Horizontal change in direction (PLAN VIEW)

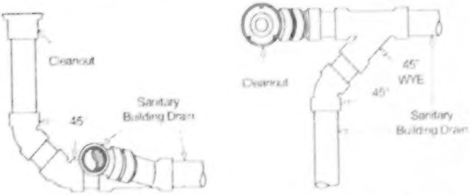

Cleanout
45°
45° WYE
Sanitary Building Drain
45° Recommended
Sanitary Drainage Branch

(b) ***Not Permitted*** - Horizontal change in direction (PLAN VIEW)


90°
Sanitary Building Drain
45°
Sanitary Building Drain

(c) Permitted - Horizontal change in direction

(ELEVATION VIEW) (PLAN VIEW)


Cleanout
Sanitary Building Drain
45°
Cleanout
45° WYE
45°
Sanitary Building Drain

Permitted angle of connections to clean-outs as per 7.4.7.4.(4)

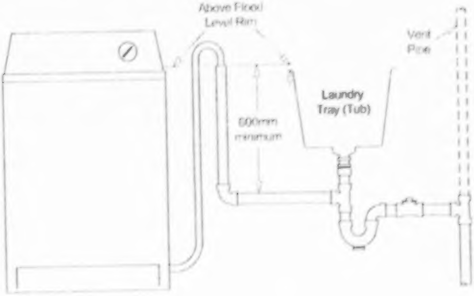
A-7.4.7.4.(1) Cleanouts for Fixture Drains. To accommodate the limitations of sewer cleaning equipment, the cleanout should be located as close as possible to the exterior wall of the building, either inside or outside, and be accessible for sewer cleaning equipment.

A-7.4.8.1.(1) Minimum Slope. Where it is not possible to grade as set out in Sentence 7.4.8.1.(1), a lesser grade may be considered provided it can be shown that it will produce a gravity flow rate of at least 0.6 m/s.

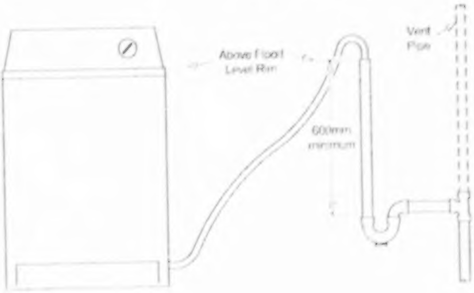
A-7.4.9.3.(3)

STANDPIPES SERVING A WASHING MACHINE

(a) A standpipe discharging into a single compartment laundry tray (Tub)


Above Flood Level Rim
Vent Pipe
Laundry Tray (Tub)
600mm minimum

(b) A washing machine discharging into a stand alone standpipe


Above Flood Level Rim
Vent Pipe
600mm minimum

The washing machine standpipe must measure a minimum of 600mm and extend above the flood level rim of a top load washer.

A-Table 7.4.9.3. Hydraulic Loads.

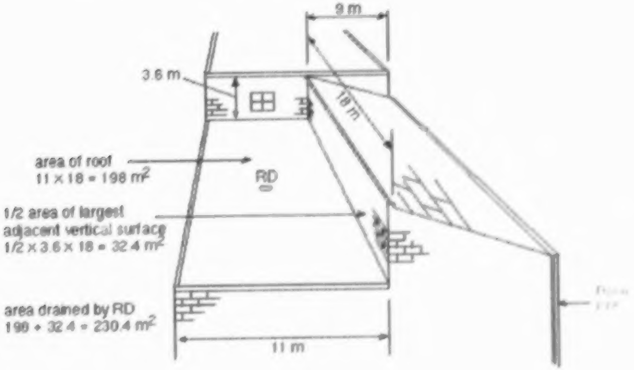
Bathroom Group. A bathroom group is considered to consist of 1 water closet, 1 lavatory, and 1 bath tub (with or without shower head) or a shower stall.

Hydraulic Loads for Laundry Traps. When determining the hydraulic load on a pipe, no allowance need be made for a load from a domestic clothes washer when discharged into a laundry tray, since the hydraulic load from the laundry tray is sufficient.

Hydraulic Loads for Floor Drains. No hydraulic load is required from a floor drain in a washroom since it is for emergency use only.

A-7.4.10.4.(1) Rainfall Intensities. Climate information on rainfall intensities for various localities is found in Supplementary Standard SB-1.

For example: According to Table 1.2 in Supplementary Standard SB-1, Richmond Hill has 25 mm of rainfall intensity in 15 min average.
The load on the roof drain is (25 x 230.4) = 5760 L


9 m
3.6 m
18 m
area of roof
11 × 18 = 198 m²
RD
1/2 area of largest
adjacent vertical surface
1/2 × 3.6 × 18 = 32.4 m²
area drained by RD
198 + 32.4 = 230.4 m²
11 m

The size of leader is 4 in. according to Table 7.4.10.10.

In general, the maximum area coverage per roof drain is 900 m^2.

A-7.4.10.5. Conversion of Fixture Units. Expansion of Table 7.4.10.5.

Table 7.4.10.5.
Maximum Probable Drainage Rate, gal/min
Forming Part of Sentences 7.4.10.3.(1), 7.4.10.5.(2)

Fixture Units in Service	*Fixture Units Col. 1*	*Fixture Units Col. 1 x 10*	*Fixture Units Col. 1 x 100*
10	21	53	174
11	23	55	183
12	24	57	192
13	24	59	201
14	25	61	210
15	25	63	219
16	26	65	228
17	26	67	237
18	27	69	246
19	27	71	254
20	27	72	262
21	28	74	271
22	29	75	280
23	29	77	289
24	30	78	298
25	30	80	307
26	31	82	316
27	31	83	325
28	32	85	334
29	32	86	342
30	33	88	350
31	33	90	359
32	34	91	368
33	34	92	377
34	35	94	386
35	35	95	395
36	36	96	403
37	36	98	411
38	37	99	419
39	37	100	427
Column 1	2	3	4

Table 7.4.10.5. (Cont'd)
Maximum Probable Drainage Rate, gal/min

Forming Part of Sentences 7.4.10.3.(1), 7.4.10.5.(2)

Fixture Units in Service	*Fixture Units* Col. 1	*Fixture Units* Col. 1 x 10	*Fixture Units* Col. 1 x 100
40	38	102	435
41	38	103	444
42	39	104	453
43	39	106	462
44	39	107	471
45	40	108	480
46	40	110	488
47	40	111	496
48	41	112	504
49	41	114	512
50	41	115	520
51	42	116	528
52	42	118	536
53	42	119	544
54	43	120	552
55	43	122	560
56	43	123	568
57	44	124	576
58	44	126	584
59	44	127	592
60	44	128	600
61	45	129	608
62	45	130	616
63	45	131	624
64	45	133	632
65	46	134	640
66	46	135	648
67	46	136	656
68	46	138	664
69	47	139	672
Column 1	2	3	4

Table 7.4.10.5. (Cont'd)
Maximum Probable Drainage Rate, gal/min

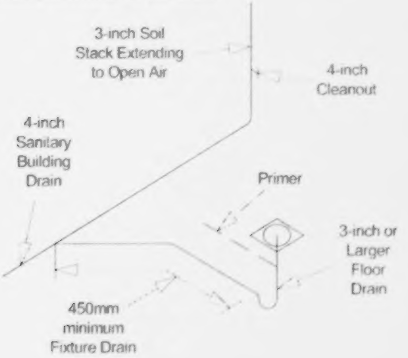
Forming Part of Sentences 7.4.10.3.(1), 7.4.10.5.(2)

Fixture Units in Service	*Fixture Units* Col. 1	*Fixture Units* Col. 1 x 10	*Fixture Units* Col. 1 x 100
70	47	140	680
71	47	141	687
72	47	143	694
73	48	144	701
74	48	145	708
75	48	147	715
76	48	148	722
77	49	149	729
78	49	151	736
79	49	152	743
80	49	153	750
81	50	154	759
82	50	155	768
83	50	156	777
84	50	157	786
85	50	159	795
86	51	160	803
87	51	161	811
88	51	162	819
89	51	163	827
90	51	164	835
91	52	165	842
92	52	166	849
93	52	167	856
94	52	168	863
95	52	169	870
96	53	170	876
97	53	171	882
98	53	172	888
99	53	173	894
100	53	174	900
Column 1	2	3	4

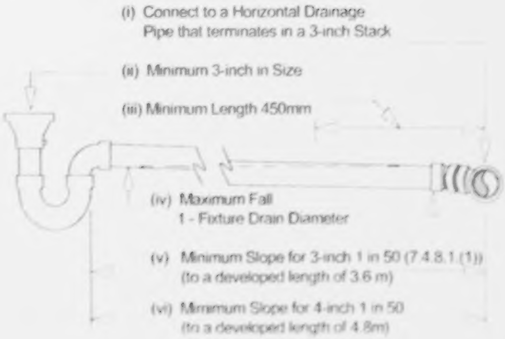
A-7.5.1.1.(3)

VENTING NOT REQUIRED

(a) Removing vent pipes for floor drains

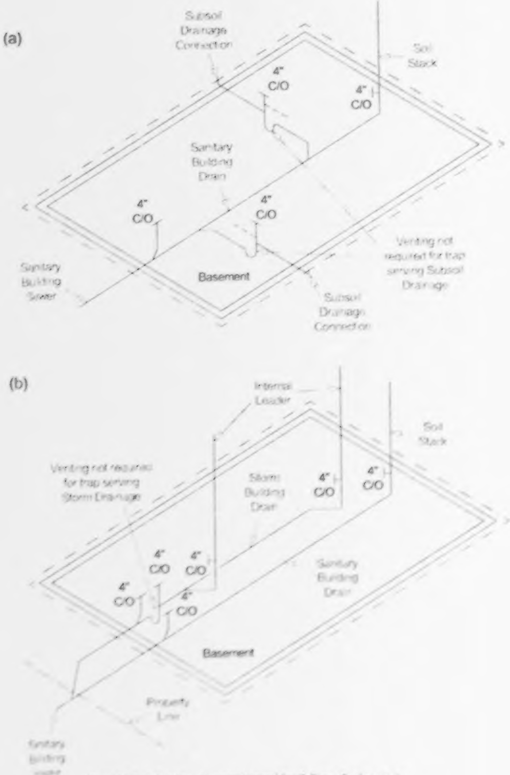

3-inch Soil
Stack Extending
to Open Air
4-inch
Cleanout
4-inch
Sanitary
Building
Drain
Primer
3-inch or
Larger
Floor
Drain
450mm
minimum
Fixture Drain

(b) Removing the vent from a floor drain


(i) Connect to a Horizontal Drainage
Pipe that terminates in a 3-inch Stack
(ii) Minimum 3-inch in Size
(iii) Minimum Length 450mm
(iv) Maximum Fall
1 - Fixture Drain Diameter
(v) Minimum Slope for 3-inch 1 in 50 (7.4.8.1.(1))
(to a developed length of 3.6 m)
(vi) Minimum Slope for 4-inch 1 in 50
(to a developed length of 4.8m)

A-7.5.1.1.(4)

VENTING NOT REQUIRED

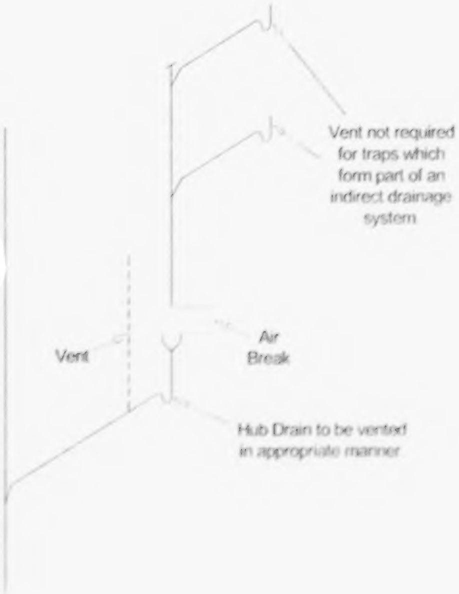

(a)
Subsoil Drainage Connection
4" C/O
4" C/O
Soil Stack
Sanitary Building Drain
4" C/O
4" C/O
Venting not required for trap serving Subsoil Drainage
Sanitary Building Sewer
Basement
Subsoil Drainage Connection
(b)
Internal Leader
Soil Stack
Venting not required for trap serving Storm Drainage
Storm Building Drain
4" C/O
4" C/O
4" C/O
4" C/O
4" C/O
4" C/O
Sanitary Building Drain
Basement
Property Line
Sanitary building sewer

See 7.1.6.1.(2). A combined building drain or a combined building sewer shall not be installed.

A-7.5.1.1.(4)

VENTING NOT REQUIRED

(c) Indirect drainage system (less than three storeys high)


Vent not required for traps which form part of an indirect drainage system
Vent
Air Break
Hub Drain to be vented in appropriate manner

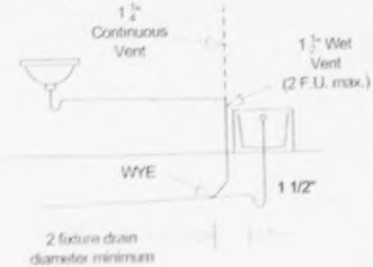
A-7.5.2.1.(1)(a)

SIZING OF WET VENTS USING TABLE 7.5.8.1.

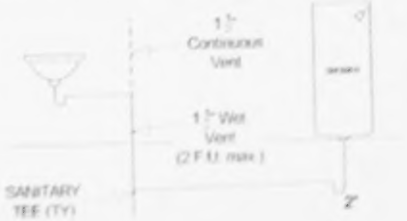
The fixtures connected to the wet vent above the most downstream fixture must not exceed a maximum of 2 fixture units for a minmum 1 1/2-inch wet vent.

The wet vent portion must not reduce in size.

(a) Bathtub being wet vented by a lavatory basin


1 1/4"
Continuous
Vent
1 1/2" Wet
Vent
(2 F.U. max.)
WYE
1 1/2"
2 fixture drain
diameter minimum

(b) Shower being wet vented by a lavatory basin


1 1/2"
Continuous
Vent
SHOWER
1 1/2" Wet
Vent
(2 F.U. max.)
SANITARY
TEE (TY)
2"

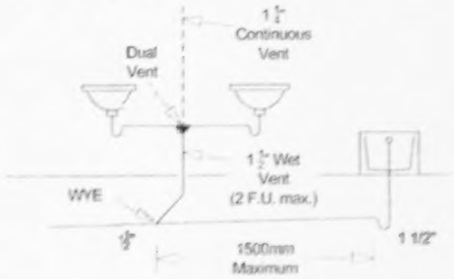
The downstream trap arm(s) may connection vertically or horizontally to the wet vent with the wet vent ending at the most downstream fixture trap arm.

The most downstream trap arm is not included in the total fixture units of the wet vent.

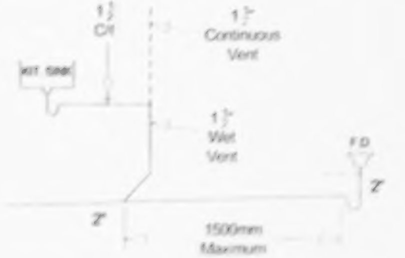
A-7.5.2.1.(1)(a)

SIZING OF WET VENTS USING TABLE 7.5.8.1.

(c) Bathtub being wet vented by two dual vented lavatory basins


1 ¼"
Continuous
Vent
Dual
Vent
1 ½" Wet
Vent
(2 F.U. max.)
WYE
1½"
1500mm
Maximum
1 1/2"

(d) Floor drain bairq wet vented by a kitchen sink


1 ½
C/I
1 ½"
Continuous
Vent
KIT. SINK
1 ½"
Wet
Vent
F.D.
2"
2"
1500mm
Maximum

The most downstream trap arm is not included in the total fixture units of the wet vent.

A 3-inch wet vent cn have 12 fixture units upstream of the 3-inch p-trap (floor drain)

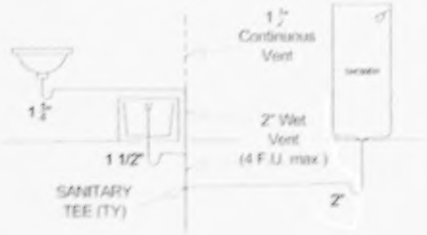
A-7.5.2.1.(1)(a)

SIZING OF WET VENTS USING TABLE 7.5.8.1.

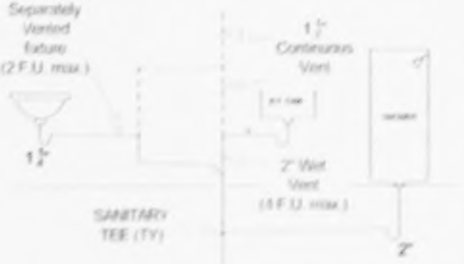
The fixtures connected to the wet vent above the most downstream fixture must not exceed a maximum of 4 fixture units for a minmum 2-inch wet vent.

The wet vent portion must not reduce in size.

(e) A lavatory basin and a bathtub wet venting through a shower


1 1/2"
Continuous
Vent
1 1/4"
2" Wet
Vent
(4 F.U. max.)
1 1/2"
SANITARY
TEE (TY)
2"

(f) Shower being wet vented by a kitchen sink with a lavatory basin


Separately
Vented
fixture
(2 F.U. max.)
1 1/2"
Continuous
Vent
1 1/4"
2" Wet
Vent
(4 F.U. max.)
SANITARY
TEE (TY)
2"

See Clause 7.5.2.1.(1)(e). Any separately vented branches or fixture drains connecting to the wet vent on the same storey must not exceed a total of 2 fixture units.

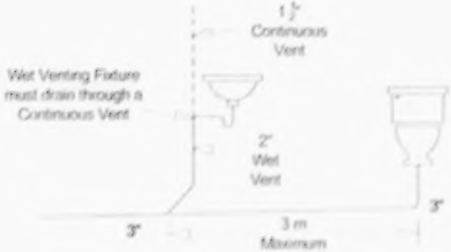
A-7.5.2.1.(1)(a)

SIZING OF WET VENTS USING TABLE 7.5.8.1.

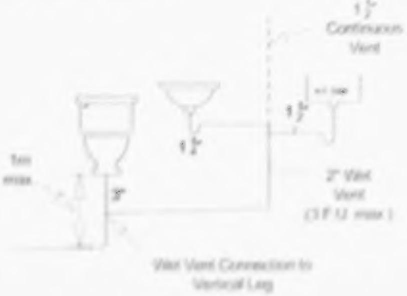
The fixtures connected to the wet vent above the water closet must not exceed a maximum of 3 fixture units for a minmum 2-inch wet vent.

The wet vent portion must not reduce in size.

(e) Water closet being wet vented by a lavatory basin


1 ½"
Continuous
Vent
Wet Venting Fixture
must drain through a
Continuous Vent
2"
Wet
Vent
3"
3"
3 m
Maximum

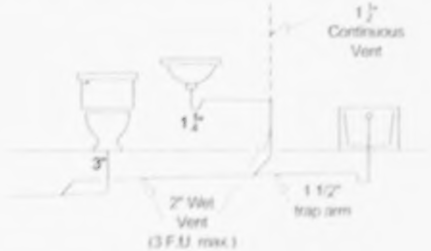
(f) A lavatory basin and a kitchen sink wet venting through a downstream water closet


1 ½"
Continuous
Vent
1 ½"
1 ½"
1m
max.
3"
2" Wet
Vent
(3 F.U. max.)
Wet Vent Connection to
Vertical Leg

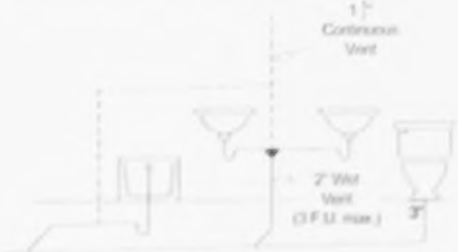
A-7.5.2.1.(1)(a)

SIZING OF WET VENTS USING TABLE 7.5.8.1.

(g) A lavatory basin and a bathtub wet venting through a downstream water closet


1 1/2" Continuous Vent
1 1/4"
3"
2" Wet Vent (3 F.U. max.)
1 1/2" trap arm

(h) Dual vented lavatory basins wet venting a water closet


1 1/2" Continuous Vent
2" Wet Vent (3 F.U. max.)
3"

The bathtub exceeds the limit of 3 fixture units for a 2-inch wet vent and must connect downstream of the water closet and be individually vented.

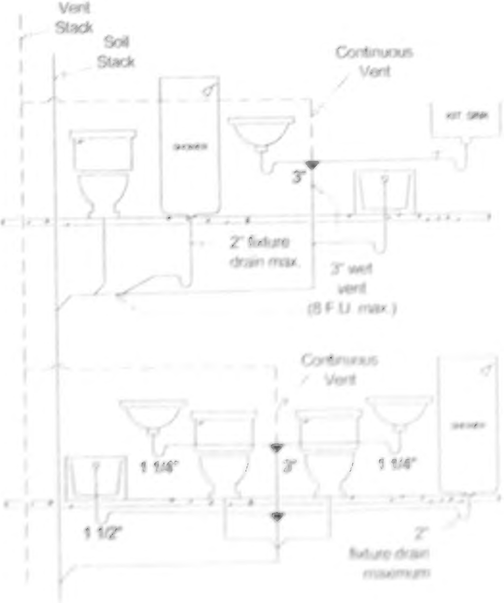
A-7.5.2.1.(1)(b) & (c)

WET VENTING A RESIDENTIAL BATHROOM GROUP (FORMERLY MODIFIED STACK VENTING, A FORM OF STACK VENTING)

The fixtures connected to the wet vent above the water closet(s) must;

- (i) not be larger than 2-inch (except for a floor drain as per 7.5.1.1.(3)).
- (ii) not exceed a maximum of 8 fixture units for a minmum 3-inch wet vent, and the size of the wet vent portion must not be reduced in size.

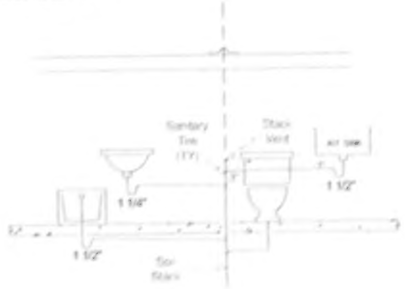
The number of installed water closets in not greater than two, connected at the same level to a vertical part of the stack and must be downstream of all other fixtures.


Vent Stack
Soil Stack
Continuous Vent
3"
2" fixture drain max.
3" wet vent (8 F.U. max.)
Continuous Vent
1 1/4"
3"
1 1/4"
1 1/2"
2" fixture drain maximum

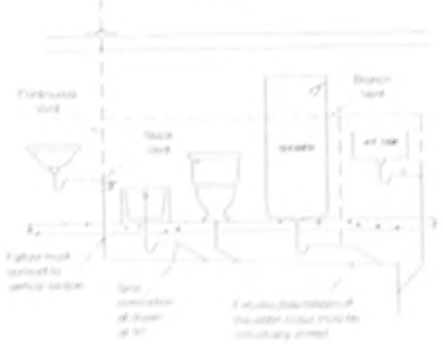
A-7.5.2.1.(1)(d)

WET VENTING
(FORMERLY STACK VENTING)

(a) Vertical stack vent


Sanitary
Tee
(TY)
Stack
Vent
3"
1 1/4"
1 1/2"
1 1/2"
Soil
Stack

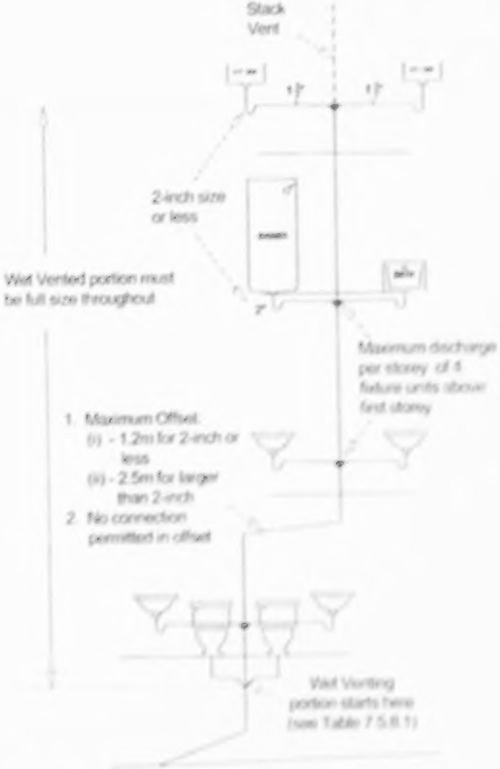
(b) Horizontal contuation of the soil stack


Continuous
Vent
Stack
Vent
shower
Branch
Vent
3"
Fixture must
connect to
vertical section
Fixtures downstream of
the water closet must be
individually vented

Any fixture connected downstream of the wet vented (stack vented) water closet must be individually vented.

A-7.5.2.1.(1)(h) & (i)

MULTI-STOREY WET VENTING

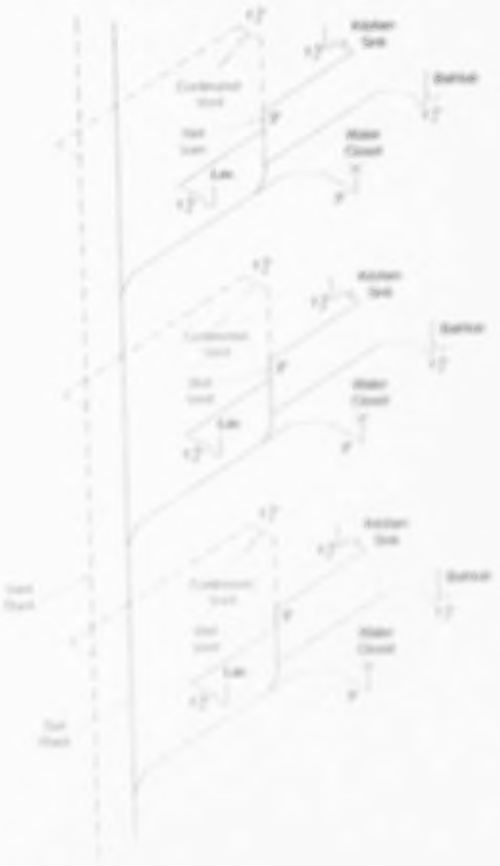

Stack Vent
1½"
1½"
2-inch size or less
2"
Wet Vented portion must be full size throughout
Maximum discharge per storey of 4 fixture units above first storey
1. Maximum Offset:
(i) - 1.2m for 2-inch or less
(ii) - 2.5m for larger than 2-inch
2. No connection permitted in offset
Wet Venting portion starts here (see Table 7.5.8.1)

When the wet vent extends higher than four storeys the stack vent must extend through the roof the same size as the wet vent.

A-7.5.2.1.(1)

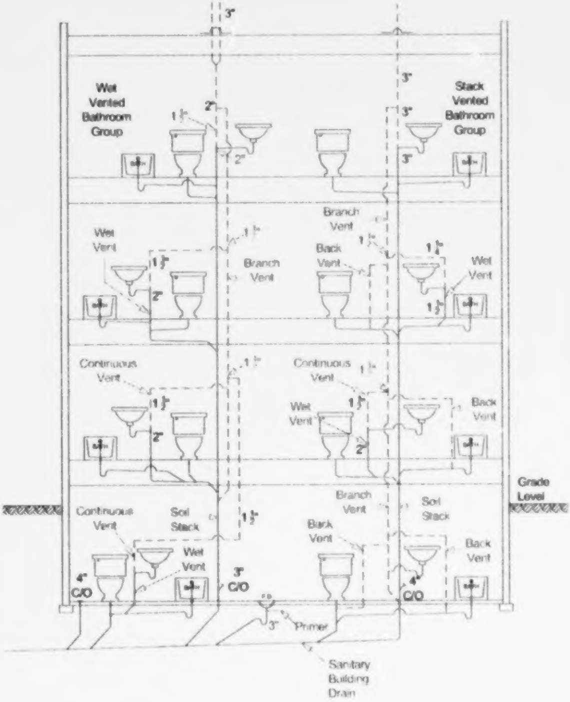
SINGLE STOREY WET VENTING
(FORMERLY MODIFIED STACK VENTING)

Each floor level contains a water closet, bathtub, lavatory and a kitchen sink.


1½"
Kitchen Sink
1½"
Bathtub
1½"
Continuous Vent
3"
Wet Vent
Water Closet
3"
Lav
1½"
1½"
Kitchen Sink
1½"
Bathtub
1½"
Continuous Vent
3"
Wet Vent
Water Closet
3"
Lav
1½"
1½"
Kitchen Sink
1½"
Bathtub
1½"
Vent Stack
Continuous Vent
3"
Wet Vent
Water Closet
3"
Lav
1½"
Soil Stack

A-7.5.2.1.(1) & 7.5.4.1.

WET VENTING, BACK VENTING AND STACK VENTING

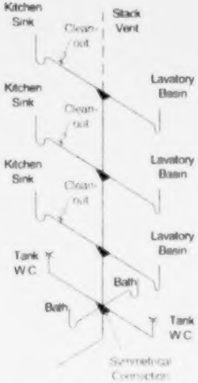

3"
Wet Vented Bathroom Group
1 ½"
2"
2"
3"
3"
Stack Vented Bathroom Group
3"
Branch Vent
Wet Vent
1 ½"
1 ½"
2"
Branch Vent
Back Vent
1 ½"
1 ¼"
Wet Vent
1 ½"
Continuous Vent
1 ½"
2"
1 ½"
Continuous Vent
1 ½"
Wet Vent
1 ½"
2"
Back Vent
Grade Level
Branch Vent
Soil Stack
Continuous Vent
Soil Stack
1 ½"
Back Vent
Back Vent
Wet Vent
4" C/O
3" C/O
4" C/O
F.D.
3"
Primer
Sanitary Building Drain

See Table 7.5.8.3. Sizing branch vents, headers, continuous vents and circuit vents by anticipating 3 m per floor and calculating the total fixture units.

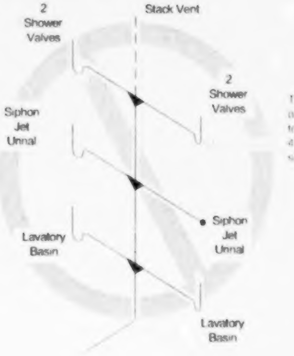
A-7.5.2.1.(1)

MULTI-STOREY WET VENTING

(a) Permitted


Kitchen Sink
Stack Vent
Clean-out
Lavatory Basin
Kitchen Sink
Clean-out
Lavatory Basin
Kitchen Sink
Clean-out
Lavatory Basin
Tank WC
Bath
Bath
Tank WC
Symmetrical Connection

(b) ***Not Permitted***

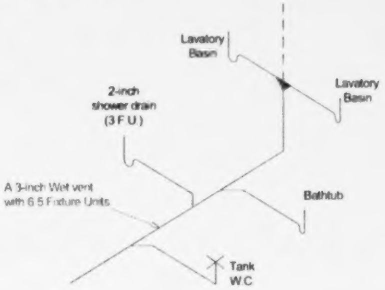

2 Shower Valves
Stack Vent
2 Shower Valves
Siphon Jet Urinal
Siphon Jet Urinal
Lavatory Basin
Lavatory Basin

This installation is not acceptable since there is a total discharge of more than 4 fixture units on both the second and third storeys.

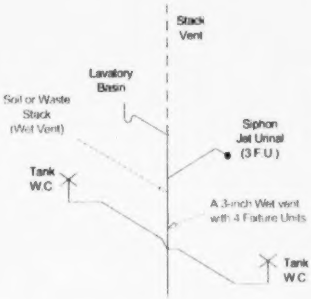
A-7.5.2.1.(1)

CONNECTIONS TO DRAINAGE SYSTEM USING WET VENTING

(a) Two lavatory basins, a bathtub and a shower drain wet venting through a downstream water closet


Lavatory Basin
Lavatory Basin
2-inch shower drain (3 F.U.)
A 3-inch Wet vent with 6.5 Fixture Units
Bathtub
Tank W.C

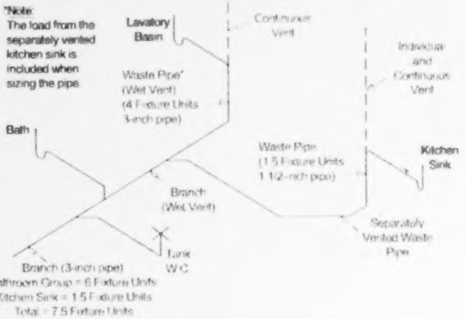
(b) A lavatory basin and a siphon jet urinal wet venting through a water closet


Stack Vent
Lavatory Basin
Soil or Waste Stack (Wet Vent)
Siphon Jet Urinal (3 F.U.)
Tank W.C
A 3-inch Wet vent with 4 Fixture Units
Tank W.C

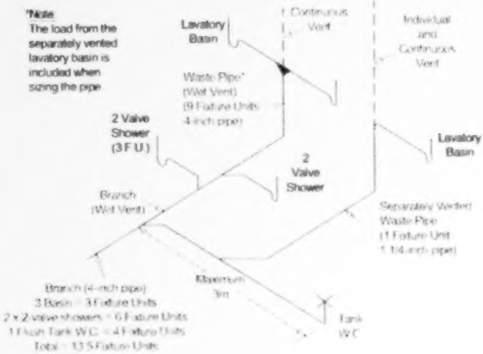
A-7.5.2.1.(1)

CONNECTIONS TO DRAINAGE SYSTEM USING WET VENTING

(c) A lavatory basin, a separately vented kitchen sink and a bathtub wet venting through a downstream water closet.


*Note:
The load from the separately vented kitchen sink is included when sizing the pipe.
Lavatory Basin
Continuous Vent
Individual and Continuous Vent
Waste Pipe*
(Wet Vent)
(4 Fixture Units
3-inch pipe)
Bath
Waste Pipe
(1.5 Fixture Units
1 1/2-inch pipe)
Kitchen Sink
Branch
(Wet Vent)
Separately Vented Waste Pipe
Tank W.C.
Branch (3-inch pipe)
Bathroom Group = 6 Fixture Units
Kitchen Sink = 1.5 Fixture Units
Total = 7.5 Fixture Units

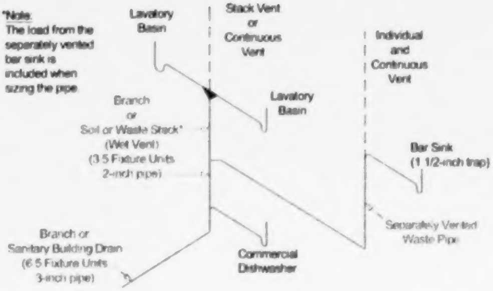
(d) Dual lavatory basins, two shower drains with two shower valves each and a separately vented lavatory basin wet venting through a downstream water closet.


*Note:
The load from the separately vented lavatory basin is included when sizing the pipe.
Lavatory Basin
Continuous Vent
Individual and Continuous Vent
Waste Pipe*
(Wet Vent)
(9 Fixture Units
4-inch pipe)
2 Valve Shower
(3 F.U.)
Lavatory Basin
2 Valve Shower
Branch
(Wet Vent)
Separately Vented Waste Pipe
(1 Fixture Unit
1 1/4-inch pipe)
Maximum 3m
Branch (4-inch pipe)
3 Basin = 3 Fixture Units
2 × 2-valve showers = 6 Fixture Units
1 Flush Tank W.C. = 4 Fixture Units
Total = 13.5 Fixture Units
Tank W.C.

A-7.5.2.1.(1)

CONNECTIONS TO DRAINAGE SYSTEM USING WET VENTING

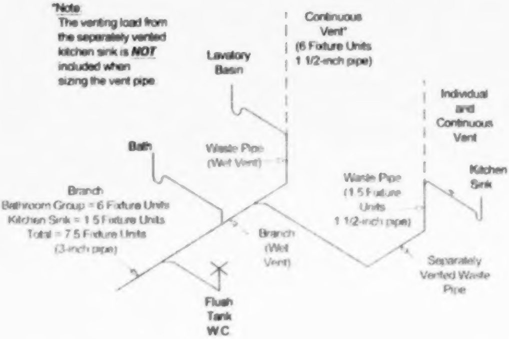
(e) An ice box, a lavatory basin, and a separately vented bar sink wet venting through a downstream commercial dishwasher.



*Note: The load from the separately vented bar sink is included when sizing the pipe.

Lavatory Basin
Stack Vent or Continuous Vent
Individual and Continuous Vent
Lavatory Basin
Branch or Soil or Waste Stack* (Wet Vent) (3.5 Fixture Units 2-inch pipe)
Bar Sink (1 1/2-inch trap)
Separately Vented Waste Pipe
Branch or Sanitary Building Drain (6.5 Fixture Units 3-inch pipe)
Commercial Dishwasher

(f) A lavatory basin, a separately vented kitchen sink, and a bathtub wet venting through a downstream water closet.



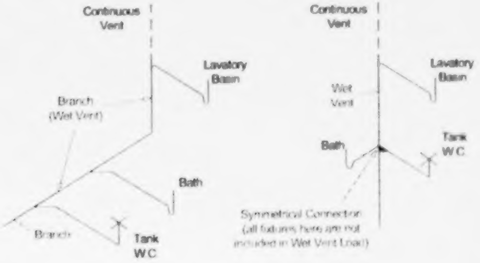
*Note: The venting load from the separately vented kitchen sink is ***NOT*** included when sizing the vent pipe.

Continuous Vent* (6 Fixture Units 1 1/2-inch pipe)
Lavatory Basin
Individual and Continuous Vent
Bath
Waste Pipe (Wet Vent)
Kitchen Sink
Waste Pipe (1.5 Fixture Units 1 1/2-inch pipe)
Branch Bathroom Group = 6 Fixture Units Kitchen Sink = 1.5 Fixture Units Total = 7.5 Fixture Units (3-inch pipe)
Branch (Wet Vent)
Separately Vented Waste Pipe
Flush Tank WC

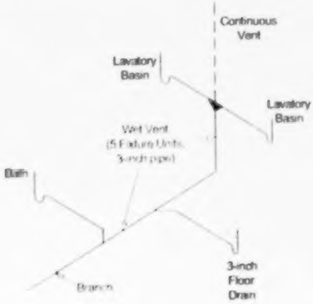
A-7.5.2.1.(1)

CONNECTIONS TO DRAINAGE SYSTEM USING WET VENTING

(g) A lavatory basin and a bathtub wet venting through a downstream water closet

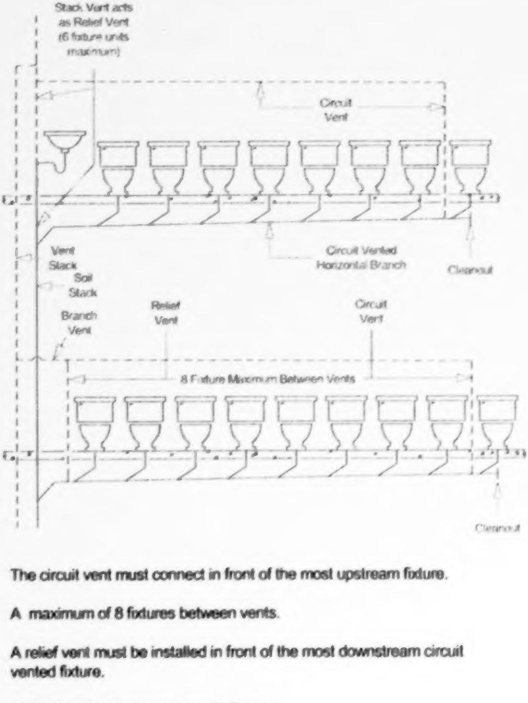

Continuous
Vent
Lavatory
Basin
Branch
(Wet Vent)
Bath
Branch
Tank
W C
Continuous
Vent
Lavatory
Basin
Wet
Vent
Bath
Tank
W C
Symmetrical Connection
(all fixtures here are not
included in Wet Vent Load)

(h) Dual lavatory basins and a floor drain wet venting through a bathtub.


Continuous
Vent
Lavatory
Basin
Lavatory
Basin
Wet Vent
(5 Fixture Units,
3-inch pipe)
Bath
Branch
3-inch
Floor
Drain

A-7.5.3.1.

CIRCUIT VENTING


Stack Vent acts as Relief Vent (6 fixture units maximum)
Circuit Vent
Vent Stack
Soil Stack
Circuit Vented Horizontal Branch
Cleanout
Branch Vent
Relief Vent
Circuit Vent
8 Fixture Maximum Between Vents
Cleanout

The circuit vent must connect in front of the most upstream fixture.

A maximum of 8 fixtures between vents.

A relief vent must be installed in front of the most downstream circuit vented fixture.

A stack vent may serve as a relief vent.

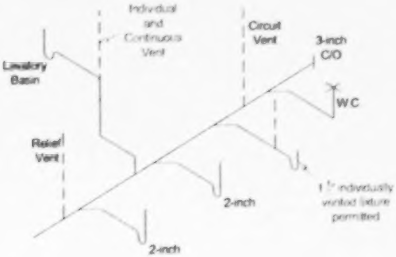
Fixtures 2-inch and larger require a minimum 3-inch horizontal branch.

Fixtures smaller than 2-inch must be separately vented or require a separate minumum 2-inch horizontal branch.

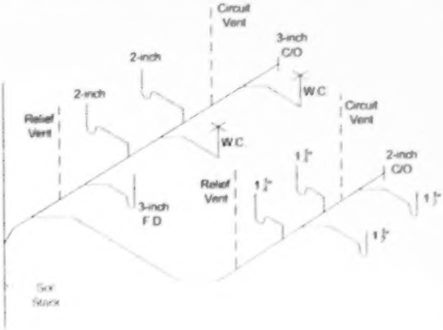
A-7.5.3.1.(2)

CIRCUIT VENTING

(a) Trap sizes smaller than 2-inch permitted when separately vented


Individual
and
Continuous
Vent
Circuit
Vent
3-inch
C/O
Lavatory
Basin
W C
Relief
Vent
2-inch
1 ½" individually
vented fixture
permitted
2-inch

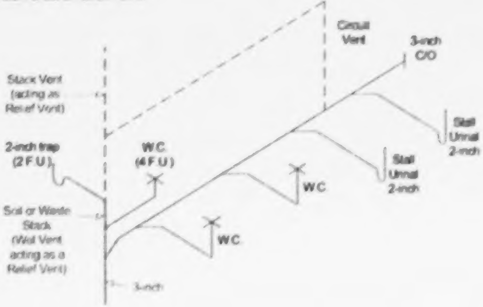
(b) One circuit vented branch with 2-inch and larger traps, a second separate circuit vented branch with traps smaller than 2-inch.


Circuit
Vent
3-inch
C/O
2-inch
2-inch
W C
Relief
Vent
W C
Circuit
Vent
1 ½"
2-inch
C/O
Relief
Vent
1 ½"
3-inch
F D
1 ½"
1 ½"
Soil
Stack

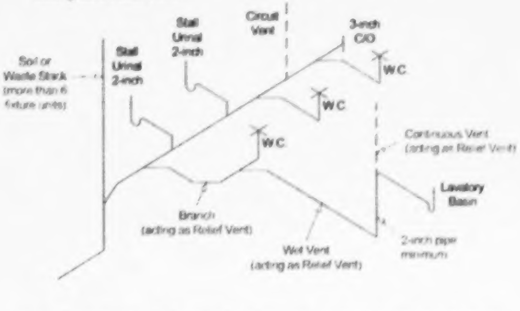
A-7.5.3.1.(4) & (5)

CIRCUIT VENTING AND RELIEF VENTING

(c) A stack vent (wet vent) with a maximum of 6 fixture units can serve as a relief vent.


Circuit Vent
3-inch C/O
Stack Vent (acting as Relief Vent)
2-inch trap (2 F.U.)
W.C. (4 F.U.)
WC
WC
Stall Urinal 2-inch
Stall Urinal 2-inch
Soil or Waste Stack (Wet Vent acting as a Relief Vent)
3-inch

(d) A circuited vented branch with a wet vented water closet acting as a relief vent

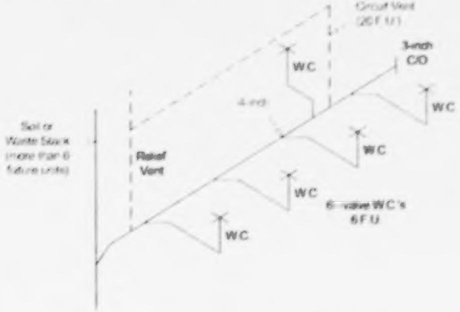

Stall Urinal 2-inch
Circuit Vent
3-inch C/O
Soil or Waste Stack (more than 6 fixture units)
Stall Urinal 2-inch
WC
WC
WC
Continuous Vent (acting as Relief Vent)
Lavatory Basin
Branch (acting as Relief Vent)
Wet Vent (acting as Relief Vent)
2-inch pipe minimum

A soil or waste pipe (being horizontal or vertical) having a hydraulic load not greater than 6 fixture units may act as a relief vent for a branch that is being circuit vented.

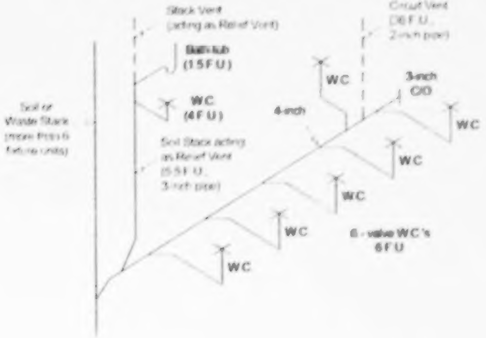
A-7.5.3.1.(4) & (5)

CIRCUIT VENTING AND RELIEF VENTING

(e) A relief vent is required since the soil or waste stack has discharge from more than 6 fixture units.


Circuit Vent
(36 F.U.)
WC
3-inch
C/O
4-inch
WC
Soil or
Waste Stack
(more than 6
fixture units)
Relief
Vent
WC
WC
6 - valve WC's
6 F.U.
WC

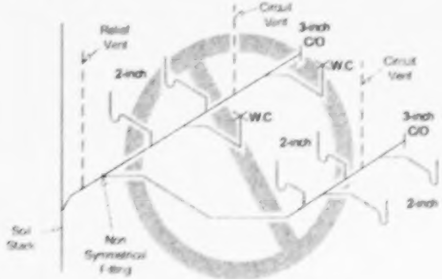
(f) A soil stack (or waste stack) with a maximum of 6 fixture units cannot be used as a relief vent.


Stack Vent
(acting as Relief Vent)
Circuit Vent
(36 F.U.,
2-inch pipe)
Bathtub
(1.5 F.U.)
WC
(4 F.U.)
WC
3-inch
C/O
4-inch
WC
Soil or
Waste Stack
(more than 6
fixture units)
Soil Stack acting
as Relief Vent
(5.5 F.U.,
3-inch pipe)
WC
WC
WC
6 - valve WC's
6 F.U.
WC

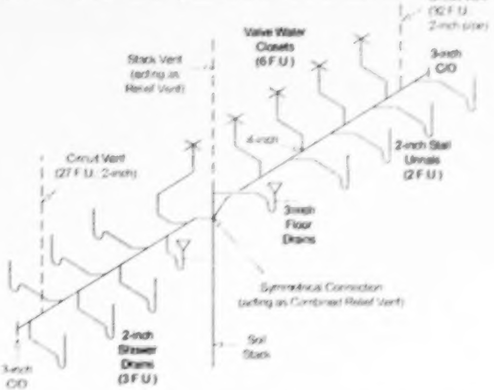
A-7.5.3.1.(5)

COMBINED RELIEF VENTING

(a) ***Not Permitted*** - The WYE fitting is not a symmetrical fitting and the relief vent is connected downstream


Circuit Vent
Relief Vent
3-inch C/O
2-inch
W.C
Circuit Vent
W.C
3-inch C/O
2-inch
2-inch
Soil Stack
Non Symmetrical Fitting

(b) Permitted - Symmetrically connected combined relief vent

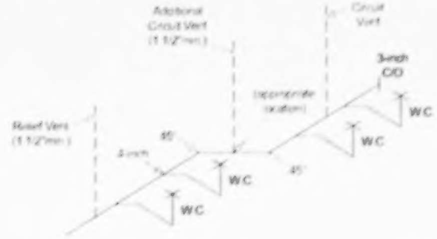

Circuit Vent (32 F.U. 2-inch pipe)
Valve Water Closets (6 F.U.)
Stack Vent (acting as Relief Vent)
3-inch C/O
4-inch
2-inch Stall Urinals (2 F.U.)
Circuit Vent (27 F.U. 2-inch)
3-inch Floor Drains
Symmetrical Connection (acting as Combined Relief Vent)
2-inch Shower Drains (3 F.U.)
Soil Stack
3-inch C/O

A soil or waste pipe (being horizontal or vertical) having a hydraulic load not greater than 6 fixture units may act as a relief vent for a branch that is being circuit vented.

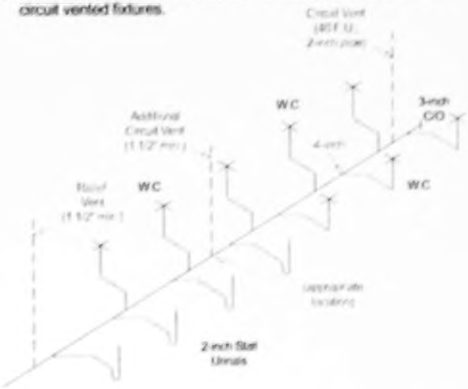
A-7.5.3.1.(6)

ADDITIONAL CIRCUIT VENTING

(a) Any change of direction greater than 45° to the circuit vented branch requires an appropriatley installed additional circuit vent.


Additional
Circuit Vent
(1 1/2" min.)
Circuit
Vent
3-inch
C/O
(appropriate
location)
W.C
W.C
Relief Vent
(1 1/2" min.)
45°
4-inch
W.C
45°
W.C

(b) An additional circuit vent is required for every group of 8 or less circuit vented fixtures.

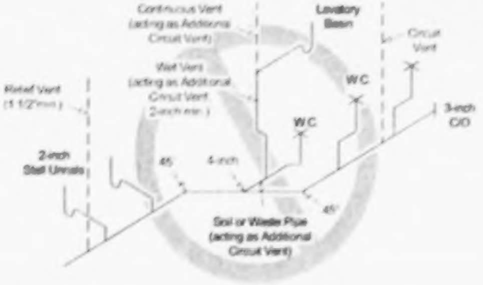

Circuit Vent
(40 F.U.,
2-inch pipe)
W.C
3-inch
C/O
Additional
Circuit Vent
(1 1/2" min.)
4-inch
Relief
Vent
(1 1/2" min.)
W.C
W.C
(appropriate
location)
2-inch Stall
Urinals

See 7.5.7.3. Additional circuit vents and relief vents are sized by the trap arms connecting to the branch or one size smaller than the circuit vent, but need not be larger than 2-inch.

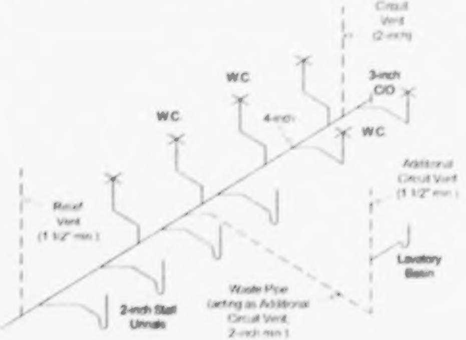
A-7.5.3.1.(7)

SIZING ADDITIONAL CIRCUIT VENTS

(c) ***Not Permitted*** - A soil or waste pipe serving as an additional circuit vent.


Continuous Vent (acting as Additional Circuit Vent)
Lavatory Basin
Circuit Vent
Wet Vent (acting as Additional Circuit Vent 2-inch min.)
Relief Vent (1 1/2" min.)
W C
W C
3-inch C/O
2-inch Stall Urinals
45°
4-inch
45°
Soil or Waste Pipe (acting as Additional Circuit Vent)

(d) An additional circuit vent is if there are more than 8 circuit vented fixtures between vents serving the horizontal branch.

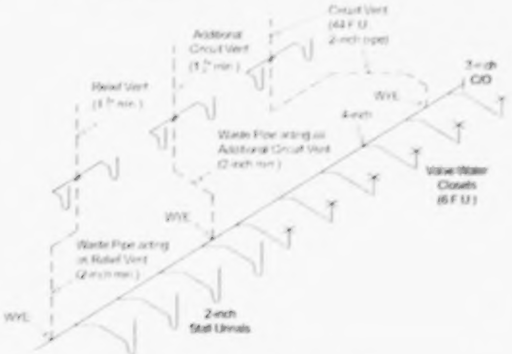

Circuit Vent (2-inch)
W C
3-inch C/O
W C
4-inch
W C
Additional Circuit Vent (1 1/2" min.)
Relief Vent (1 1/2" min.)
Lavatory Basin
2-inch Stall Urinals
Waste Pipe (acting as Additional Circuit Vent, 2-inch min.)

A soil or waste pipe may serve as an additional circuit vent provided it is sized as a wet vent and is 2-inch minimum.

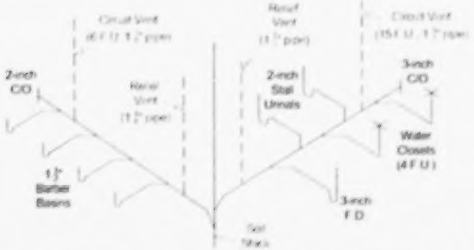
A-7.5.3.1.(8) & 7.5.7.3.(1) & (2)

SIZING CIRCUIT, ADDITIONAL CIRCUIT AND RELIEF VENTS

(e) Dual vented trap arms with a maximum of 1.5 fixture units may connect to the vertical section of a circuit, additional circuit or relief vent in accordance with 7.5.4.5.(1).


Circuit Vent
(44 F.U.
2-inch pipe)
Additional
Circuit Vent
(1 1/2" min.)
Relief Vent
(1 1/2" min.)
2-inch
C/O
WYE
4-inch
Waste Pipe acting as
Additional Circuit Vent
(2-inch min.)
Valve Water
Closets
(6 F.U.)
WYE
Waste Pipe acting
as Relief Vent
(2-inch min.)
WYE
2-inch
Stall Urinals

(f) One circuit vented branch with 2-inch and larger traps, a second separate circuit vented branch with traps smaller than 2-inch.

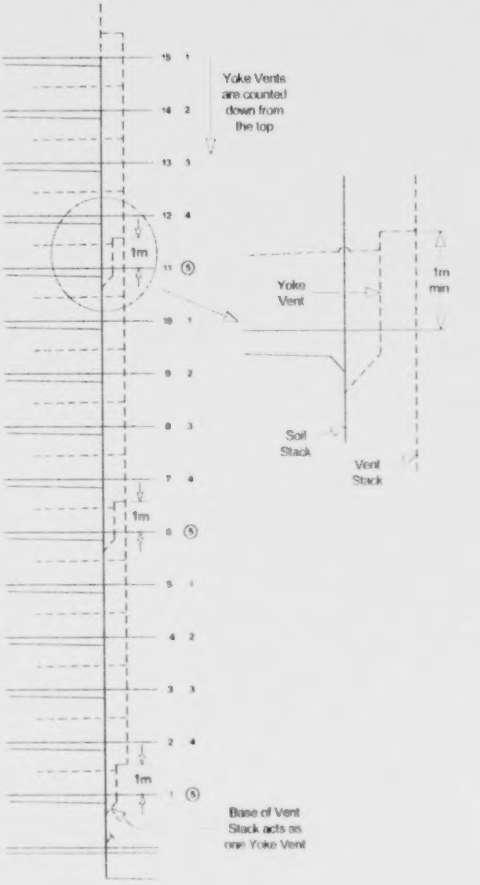

Circuit Vent
(6 F.U. 1 1/2" pipe)
Relief
Vent
(1 1/2" pipe)
Circuit Vent
(15 F.U., 1 1/2" pipe)
2-inch
C/O
Relief
Vent
(1 1/2" pipe)
2-inch
Stall
Urinals
3-inch
C/O
Water
Closets
(4 F.U.)
1 1/2"
Barber
Basins
3-inch
F.D.
Soil
Stack

The size of the circuit vent is done using the size of the trap arm and Table 7.5.8.3.

The size of the additional circuit vent and relief vent is one size smaller than the size of the circuit vent.

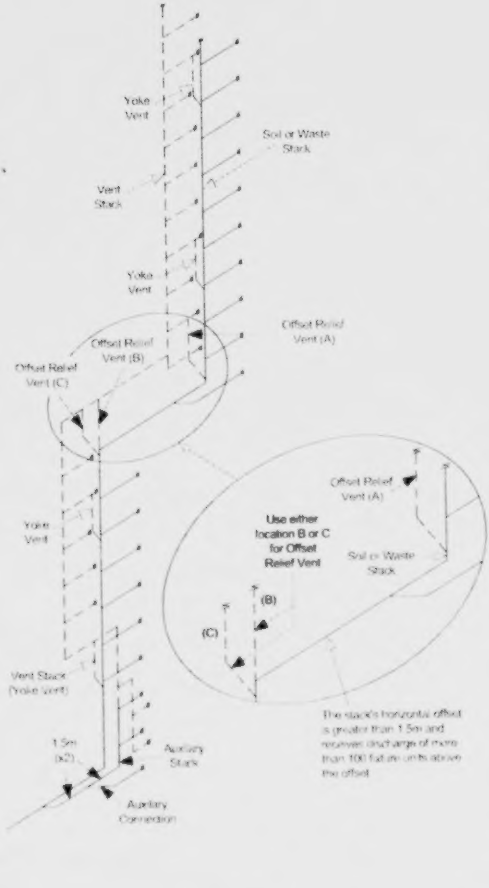
A-7.5.4.3.

YOKE VENTS


15 1
14 2
13 3
12 4
11 ⑤
10 1
9 2
8 3
7 4
6 ⑤
5 1
4 2
3 3
2 4
1 ⑤
1m
1m
1m
Yoke Vents are counted down from the top
Yoke Vent
1m min
Soil Stack
Vent Stack
Base of Vent Stack acts as one Yoke Vent

A-7.5.4.4.

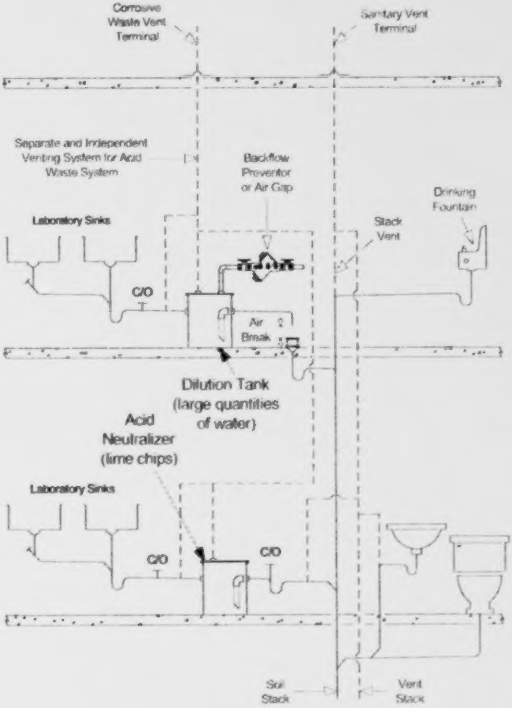
OFFSET RELIEF VENT


Yoke Vent
Soil or Waste Stack
Vent Stack
Yoke Vent
Offset Relief Vent (A)
Offset Relief Vent (B)
Offset Relief Vent (C)
Offset Relief Vent (A)
Use either location B or C for Offset Relief Vent
Soil or Waste Stack
(B)
(C)
Yoke Vent
Vent Stack (Yoke Vent)
1.5m (x2)
Auxiliary Stack
Auxiliary Connection

The stack's horizontal offset is greater than 1.5m and receives discharge of more than 100 fixture units above the offset

A-7.5.5.2.(8) & 7.5.5.3.(1)

VENTING CORROSIVE PIPING, NEUTRALIZING TANKS AND DILUTING TANKS

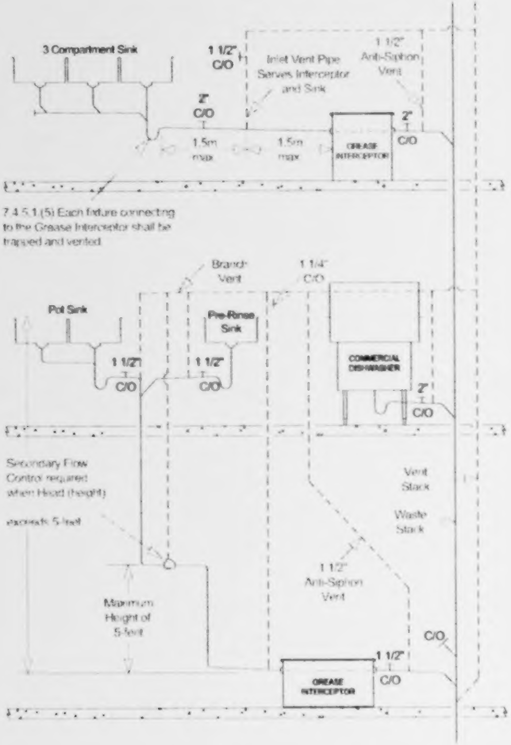

Corrosive Waste Vent Terminal
Sanitary Vent Terminal
Separate and Independent Venting System for Acid Waste System
Backflow Preventor or Air Gap
Drinking Fountain
Laboratory Sinks
Stack Vent
C/O
Air Break
Dilution Tank (large quantities of water)
Acid Neutralizer (lime chips)
Laboratory Sinks
C/O
C/O
Soil Stack
Vent Stack

See 7.2.3.1.(2). The trap seal depth on fixtures draining to an acid waste system shall be a minimum of 50mm.

See 7.4.4.4.(1). A fixture disharging corrosive or acid waste to the sanitary system must connect using a trap or an indirect connection.

A-7.5.5.2.(6) & (7)

GREASE INTERCEPTOR INSTALLATION


3 Compartment Sink
1 1/2" C/O
Inlet Vent Pipe Serves Interceptor and Sink
1 1/2" Anti-Siphon Vent
2" C/O
1.5m max
1.5m max
GREASE INTERCEPTOR
2" C/O
7.4.5.1.(5) Each fixture connecting to the Grease Interceptor shall be trapped and vented
Branch Vent
1 1/4" C/O
Pot Sink
Pre-Rinse Sink
1 1/2" C/O
1 1/2" C/O
COMMERCIAL DISHWASHER
2" C/O
Secondary Flow Control required when Head (height) exceeds 5-feet
Vent Stack
Waste Stack
1 1/2" Anti-Siphon Vent
Maximum Height of 5-feet
C/O
1 1/2" C/O
GREASE INTERCEPTOR

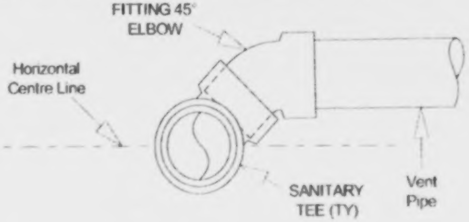
See 7.4.4.3.(9). All grease and oil interceptors require an internal flow control and if the height of the discharge exceeds 5-feet, a secondary flow control is require (venting for the secondary flow control is determined by the manufacturer).

A-7.5.6.2. Vent Pipe Connections. Except for wet venting, fittings used to connect vent pipes to nominally horizontal soil or waste pipes are specified in Subsection 7.2.4.

A-7.5.6.2.(1) & (2)

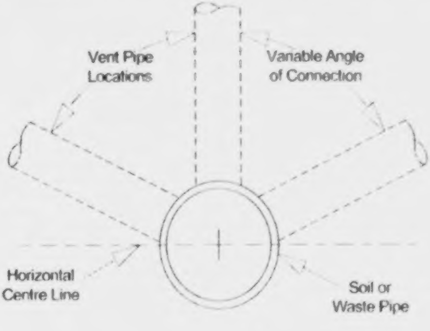
VENT PIPE CONNECTION

(a) Back vent with fitting 45° elbow above horizontal centre line


FITTING 45°
ELBOW
Horizontal
Centre Line
SANITARY
TEE (TY)
Vent
Pipe

Horizontal runs of vent pipe below the flood level rim should be eliminated when structurally possible.

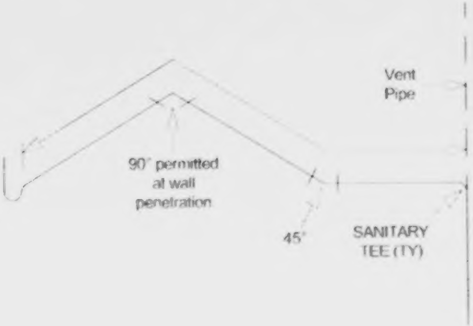
(b) Connection of back vent pipe must be above horizontal centre line


Vent Pipe
Locations
Variable Angle
of Connection
Horizontal
Centre Line
Soil or
Waste Pipe

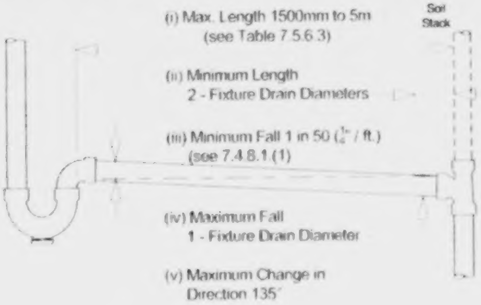
A-7.5.6.3.(1)

LOCATION OF VENT PIPES

(a) Change of Direction applies to fittings between the P-Trap and the Vent

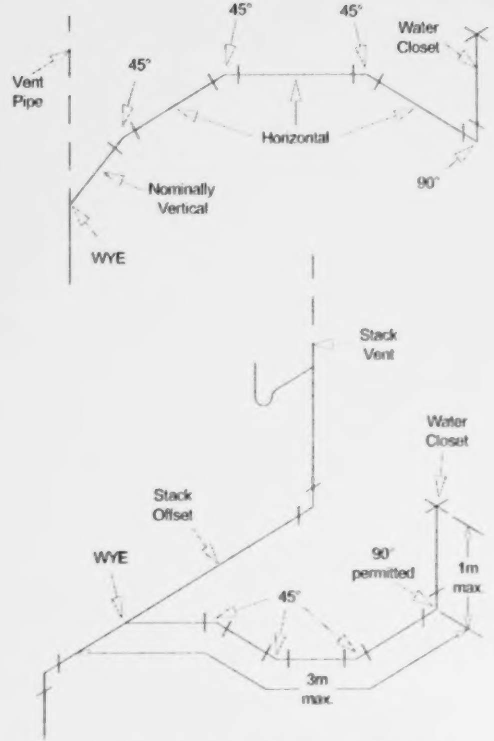

Vent
Pipe
90° permitted
at wall
penetration
45°
SANITARY
TEE (TY)

(b) Five Rules between a P-Trap and its Protecting Vent


(i) Max. Length 1500mm to 5m
(see Table 7.5.6.3)
Soil
Stack
(ii) Minimum Length
2 - Fixture Drain Diameters
(iii) Minimum Fall 1 in 50 (¼" / ft.)
(see 7.4.8.1.(1))
(iv) Maximum Fall
1 - Fixture Drain Diameter
(v) Maximum Change in
Direction 135°

A-7.5.6.3.(2) & (3)

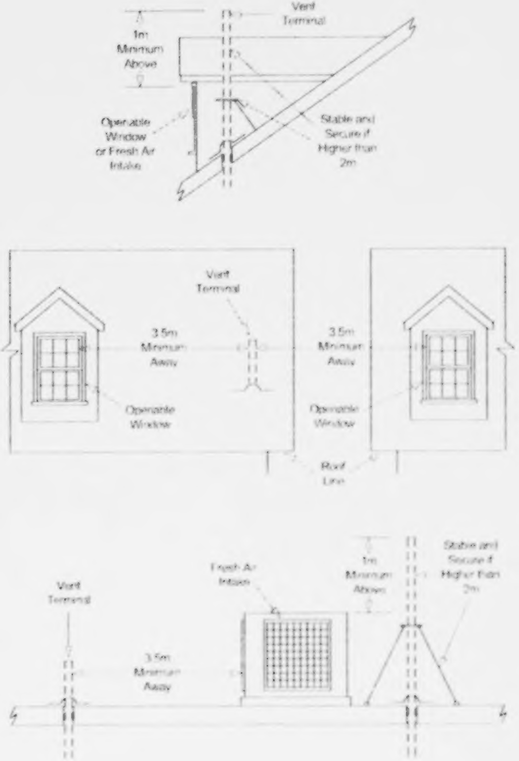
LOCATION OF VENT PIPES


45°
45°
Water Closet
Vent Pipe
45°
Horizontal
Nominally Vertical
90°
WYE
Stack Vent
Water Closet
Stack Offset
WYE
90° permitted
1m max
45°
3m max

Cumulative change in direction for a water closet discharging vertically is 225° to 1 metre on the vertical plane and 3 metres maximum on the horizontal plane.

A-7.5.6.5.(4)

LOCATION OF VENT TERMINALS


Vent Terminal
1m Minimum Above
Operable Window or Fresh Air Intake
Stable and Secure if Higher than 2m
Vent Terminal
3.5m Minimum Away
3.5m Minimum Away
Operable Window
Operable Window
Roof Line
Vent Terminal
Fresh Air Intake
1m Minimum Above
Stable and Secure if Higher than 2m
3.5m Minimum Away

a_1 **A-7.6.1.1.(1) Design of Potable Water Systems.** The design procedures contained in the following documents are considered good engineering practice in the field of potable water systems:

(a) *2003 ASHRAE Handbook of HVAC Applications*, Chapter 45, "Control of Gaseous Indoor Air Contaminants",
(b) *1999 ASPE Data Book* - Volume 2, Chapter, 5,"Cold Water Systems", and
(c) *1999 ASPE Data Book* - Volume 2, Chapter, 6,"Domestic Water Heating Systems Fundamentals",

Alternative procedures shown below are also acceptable.

e_2 Table A-7.6.1.1.
Pipe Size Based on the Number of Fixtures Units Served [1]

Water Service, Inches	Water Distribution System, Inches	Maximum Allowable Length - Metres														
		12	18	24	30	46	61	76	91	122	152	183	213	244	274	305
Pressure Range		Number of Fixture Units Served														
200 to 310 kPa (30 to 45 psi)																
¾"	½"	6	5	4	3	2	1	1	1	0	0	0	0	0	0	0
¾"	¾"	18	16	14	12	9	6	5	5	4	4	3	2	2	2	1
¾"	1"	29	25	23	21	17	15	13	12	10	9	7	6	6	6	6
1"	1"	36	31	27	25	20	17	15	13	12	10	8	6	6	6	6
1"	1¼"	54	47	42	38	32	28	25	23	19	17	14	12	12	11	11
1½"	1¼"	90	68	57	48	38	32	28	25	21	18	15	12	12	11	11
1½"	1½"	151	124	105	91	70	57	49	45	36	31	26	23	21	20	20
2"	1½"	210	162	132	110	80	64	53	46	38	32	27	23	21	20	20
1½"	2"	220	205	190	176	155	138	127	120	104	85	70	61	57	54	51
2"	2"	372	329	292	265	217	185	164	147	124	96	70	61	57	54	51
2"	2½"	445	418	390	370	330	300	280	265	240	220	198	175	158	143	133
311 to 413 kPa (46 to 60 psi)																
¾"	½"	9	7	6	5	4	3	2	2	1	1	1	0	0	0	0
¾"	¾"	27	23	19	17	14	11	9	8	6	5	4	4	3	3	3
¾"	1"	44	40	36	33	28	23	21	19	17	14	12	10	9	8	8
1"	1"	60	47	41	36	30	25	23	20	18	15	12	10	9	8	8
1"	1¼"	102	87	76	67	52	44	39	36	30	27	22	20	19	17	16
1½"	1¼"	156	130	106	89	66	52	44	39	33	29	24	20	19	17	16
1½"	1½"	270	225	193	167	128	105	90	78	62	52	42	38	35	32	30
2"	1½"	286	286	242	204	150	117	98	84	67	55	42	38	35	32	30
1½"	2"	360	360	340	318	272	240	220	198	170	150	135	123	110	102	94
2"	2"	570	510	470	430	368	318	280	250	205	165	142	123	110	102	94
2"	2½"	680	640	610	580	535	500	470	440	400	365	335	315	285	267	250
Col. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

e₂

Table A-7.6.1.1. (Cont'd)
Pipe Size Based on the Number of Fixtures Units Served [(1)]

Water Service, Inches	Water Distribution System, Inches	Maximum Allowable Length - Metres														
		12	18	24	30	46	61	76	91	122	152	183	213	244	274	305
Pressure Range		Number of Fixture Units Served														
Over 413 kPa (60 psi)																
¾"	½"	11	9	7	6	5	4	3	3	2	1	1	1	1	1	0
¾"	¾"	31	28	24	22	17	13	11	10	8	7	6	6	5	4	4
¾"	1"	63	53	47	42	35	30	27	24	21	17	14	13	12	12	11
1"	1"	72	66	55	48	38	32	29	26	22	18	14	13	12	12	11
1"	1¼"	140	126	108	96	74	62	53	47	39	31	26	25	23	22	21
1½"	1¼"	156	156	150	127	93	74	62	54	43	34	26	25	23	22	21
1½"	1½"	286	286	273	240	186	154	130	113	88	73	51	51	46	43	40
2"	1½"	286	286	286	275	220	170	142	122	98	82	64	51	46	43	40
1½"	2"	360	360	360	360	360	335	305	282	244	212	187	172	153	141	129
2"	2"	611	611	610	560	478	420	375	340	288	245	204	172	153	141	129
2"	2½"	690	690	690	690	690	650	610	570	510	460	430	404	380	356	329
Col. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

Notes to Table 7.6.1.1.:

(1) Branch pipes up to 7 m developed length (from main to outlet or fixture) may supply a maximum of 4 fixture units if they are half-inch nominal size and a maximum of 16 fixture units if they are three-quarter-inch nominal size.

a₁ **A-7.6.1.3.(6) Identification of Underground Non-metallic Pipe.** Metallic piping may be used to extend underground non-metallic water supply piping above the floor. In these cases, the metallic pipe extension should not be used for electrical grounding purposes. Therefore, it is advisable to post a permanent sign indicating "plastic piping underground - do not use for electrical grounding purposes" in a conspicuous location.

A-7.6.1.6.(1) Residential Suites. Where multiple risers convey the water supply to dwelling units, each dwelling unit's water distribution system shall be provided with a shut-off valve located immediately where the water piping enters the suite so as to isolate the fixtures as well as the water distribution piping serving the dwelling unit's fixtures. Fixture stopcocks or shut-off valves located immediately adjacent to a fixture may not be adequate to protect the water distribution piping. Where a residential suite is served by a single shut-off valve on the water supply, additional shut-off valves may be required to achieve compliance with Sentences 7.6.1.5.(1) and 7.6.1.8.(1).

A-7.6.1.10. Check Valves. When a check valve is required by Sentence 7.6.1.10.(1), or a backflow preventer by Article 7.6.2.2., or a pressure reducing valve by Article 7.6.3.3., protection against thermal expansion may be required.

A-7.6.1.12.(6) Relief Valves. A relief valve shall not be routed through or discharge to an area where freezing temperatures may occur. If the discharge piping is longer than 2 m or more than two 90° elbows are used, the valve manufacturer's installation instructions should be followed to ensure that the piping does not affect the relief valve's discharge capacity.

A-7.6.1.14.(1) Water Hammer Prevention. Water hammer is a build-up of pressure in a length of horizontal or vertical pipe which occurs when a valve or faucet is closed suddenly. The longer the pipe and the greater the water velocity the greater is the pressure exerted on the pipe, which can be many times the normal static water pressure and be sufficient to burst the pipe. Ordinary kitchen and bathroom faucets can be closed quickly enough to cause water hammer even with relatively low water pressure in the pipe.

Means of preventing water hammer should be installed wherever there are valves or faucets, particularly where they are at the end of long lengths of pipes. This may be done by installing either water hammer arresters which are manufactured for the purpose or air chambers installed vertically that are fabricated from pieces of piping with a closed upper end and connected to the end of the horizontal or vertical run of pipe.

The air chamber should be 300 to 450 mm long if made from the same size pipe as the water pipe it serves. If the chamber is made from a pipe with larger diameter than the water pipe, its length can be reduced accordingly.

Air chambers should be accessible if they are the manufactured type with top air valve and a stop-and-waste valve or are of the diaphragm type.

A-7.6.1.16.(1) Thermal Expansion. To accommodate the increase in pressure caused by thermal expansion within a closed water system, one of the following should be installed:

(a) a suitably sized diaphragm expansion tank designed for use within a potable water system,

(b) an auxiliary thermal expansion relief valve (T.E.R. valve) conforming to CAN/CSA-B125, "Plumbing Fittings", set to a pressure of 550 kPa or less and designed for repeated use, or

(c) other means acceptable to the authority having jurisdiction.

A-7.6.2.4.(9) Locations Requiring Premise Isolation.
The following list is a guide to locations where premise isolation may be required:

- hospital buildings with operating, mortuary or laboratory facilities
- radioactive material processing plants
- petrochemical processing facilities
- premises where inspection is restricted
- sewage treatment plants
- commercial laundries (excluding laundromats)
- plating or chemical plants
- docks and dockside facilities
- food and beverage processing plants
- steam plants
- trackside facilities for trains

An assessment of the hazard must be carried out to determine the need, if any, for a backflow prevention device.

e1 **A-7.6.2.8.(1) Flushing and Disinfecting Water Service Pipes.** Water service pipes of 100 mm in size or larger shall be flushed and disinfected. Flushed sections shall be protected from contamination.

After flushing is completed, water from the existing distribution system shall be allowed to flow at a controlled rate into the new piping. Liquid chlorine solution shall be introduced so that the chlorine is distributed throughout the section being disinfected. The chlorine shall be applied so that the chlorine concentration is 50 mg/L minimum throughout the section. Then the system shall be left charged with 50 mg/L chlorine solution for 24 hours.

Test the chlorine residual piping after 24 hours. If tests indicate a chlorine residual of at least 25 mg/L, the section shall be flushed completely and recharged with water normal to the operation of the system. If the test does not meet the requirements, the chlorination procedure shall be repeated until satisfactory results are obtained. After the system has been recharged, take samples for bacteriological tests. If there is indication of contamination, the disinfection procedure shall be repeated. The system shall not be put into operation until clearance has been given by the inspector appointed by the chief building official.

a_3 **A-7.6.2.5. Backflow from Buildings with a Solar Domestic Hot Water System.** The Building Code regulates where a backflow preventer is required. Articles 7.6.2.1.and 7.6.2.2. require protection of potable water systems against contamination due to reversal of the normal direction of flow between a potable water system and any other system containing non-potable water or substances, where there is a direct connection between the two systems.

Consequently, a backflow prevention device is required in a solar domestic hot water (SDHW) system only where there is a direct connection between the building's potable water make-up supply and the solar heat transfer loop containing non-potable fluids. Where a non-potable heat transfer loop is charged with potable water through a charging port that is not permanently connected to a potable water system, the temporary connection to the potable water system shall include a backflow preventer or an air gap.

Equipment forming part of a packaged system for solar heating of potable water must conform to CSA-F379.1, "Packaged Solar Domestic Hot Water Systems (Liquid-to-Liquid Heat Transfer) for All-Season Use". The installation of packaged systems for solar heating of potable water in residential occupancies must be in conformance with CSA-F383, "Installation of Packaged Solar Domestic Hot Water Systems". All other systems must be installed in accordance with good engineering practice and are expected to comply, where applicable, with the same practices required for package systems.

According to Clause 7.4.3.1. of CSA-F379.1, a SDHW system that utilizes a single-wall heat exchanger is required to contain a relatively harmless heat transfer fluid (which may present minor to moderate hazard) and be properly labelled. In this case, a permanent backflow prevention device would be required on the charging line between the potable water system and the heat transfer loop only if there is a permanent direct connection between the heat transfer loop and the potable water system. Otherwise, the Building Code does not require backflow prevention devices on the domestic hot or cold potable water lines. In case of a conflict between the provisions of the Building Code and the standard, the provisions of the Building Code govern.

Similarly, where a SDHW system has a double-wall heat exchanger and there is a permanent direct connection between the heat transfer loop and the potable water system, the selection of the required backflow preventer would be determined in accordance with Sentence 7.6.2.4.(5), based on the type of heat transfer fluid used and other risks.

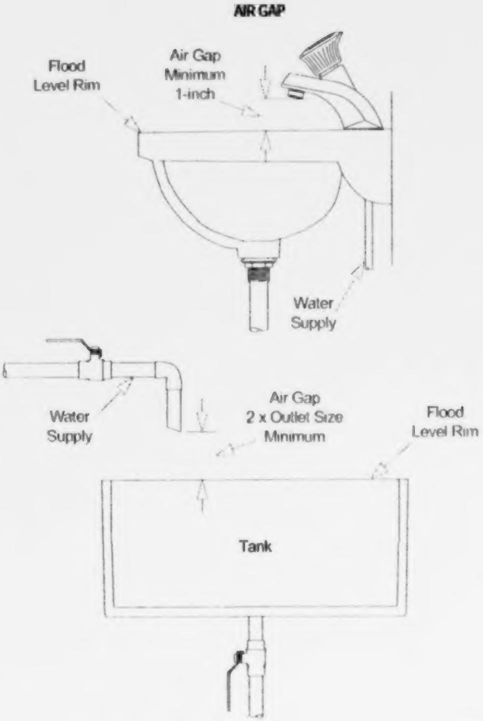
The requirement for premise isolation would be determined based on the use and the occupancy of the entire building. In most cases, the installation of a domestic solar hot water system that has a direct connection to a potable water system, alone, would not require the premise isolation referenced in Sentence 7.6.2.4.(9).

"Relatively harmless" as defined in CSA-F379.1, "Packaged Solar Domestic Hot Water Systems (Liquid-to-Liquid Heat Transfer) for All-Season Use" as a fluid having an oral LD50 of 15,000 mg/kg or greater, in accordance with Toxicity Class 6 (relatively harmless) of the Hodge and Sterner scale. The Hodge and Sterner scale is a toxicity scale recognized by the Canadian Centre for Occupational Health and Safety that provides ratings from 1 (extremely toxic) to 6 (relatively harmless) based on the LD 50 approach for oral administration. LD stands for "Lethal Dose". LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. The LD50 is one way to measure the short-term poisoning potential (acute toxicity) of a material.

Information is published in the material safety data sheets supplied with all heat-transfer fluid shipments, as required by Canadian law.

A-7.6.2.9.(2) Air Gap. (See page 108)

A - 7.6.2.9.


AIR GAP
Flood Level Rim
Air Gap Minimum 1-inch
Water Supply
Water Supply
Air Gap 2 x Outlet Size Minimum
Flood Level Rim
Tank

Appendix B

Imperial Conversions of Metric Values

Imperial conversions may be determined using the factors listed below.

Conversion Factors		
to Convert	to	Multiply by
°C	°F	1.8 and add 32
g	oz	0.0353
g	lb	0.0022
kg	lb	2.2046
kg/m^2	lb/ft^2	0.20481
kPa	lb/in^2	0.14503
kPa	lb/ft^2	20.885
L	gal (Imp)	0.21997
L	gal (US)	0.26417
L/m^2	gal/ft^2 (Imp)	0.02044
L/s*	gal/min (Imp)	13.198
L/s*	gal/min (US)	15.850
L/s**	ft^3/min	2.1189
L/s·m	cfm/ft	0.64584
L/s·m^2	cfm/ft^2	0.19685
lx	ft-candle	0.09290
mm	in	0.03937
m	ft	3.2808
m^2	ft^2	10.764
m^3	ft^3	35.315
m^3/h	ft^3/min	0.58857
m/s	ft/min	196.85
MJ	Btu	947.82
m^2·°C/W (RSI)	ft^2·h·°F/Btu (R)	5.6785
N	lbf	0.22481
ng/Pa·s·m^2	perms	0.01741
W	Btu/h	3.4122
Column 1	2	3

Notes: * liquid volume flowrate
** air volume flowrate

SI Units and their Multiples

The SI prefixes used to form names and symbols of decimal multiples and sub-multiples of SI units are:

Prefix	Symbol	Magnitude	Factor
exa	E	1 000 000 000 000 000 000	10^{18}
peta	P	1 000 000 000 000 000	10^{15}
tera	T	1 000 000 000 000	10^{12}
giga[1]	G	1 000 000 000	10^{9}
mega[1]	M	1 000 000	10^{6}
kilo[1]	k	1 000	10^{3}
hecto[2]	h	100	10^{2}
deca[2]	da	10	10^{1}
deci[2]	d	0.1	10^{-1}
centi[2]	c	0.01	10^{-2}
milli[1]	m	0.001	10^{-3}
micro[1]	µ	0.000 001	10^{-6}
nano[1]	n	0.000 000 001	10^{-9}
pico	p	0.000 000 000 001	10^{-12}
femto	f	0.000 000 000 000 001	10^{-15}
atto	a	0.000 000 000 000 000 001	10^{-18}
Col . 1	2	3	4

Notes: (1) most frequently used
(2) avoid if possible

Ministry of Municipal Affairs and Housing
Building and Development Branch

Ontario

Supplementary Standard SA-1

Objectives and Functional Statements Attributed to the Acceptable Solutions

January 1, 2010

COMMENCEMENT

Supplementary Standard SA-1 comes into force on the 31st day of December, 2006.

m_8 Ruling of the Minister of Municipal Affairs and Housing (Minister's Ruling) MR-09-S-09 takes effect on the 1st day of January, 2010.

ERRATA

e_1 Issued April 2nd, 2007.
e_4 Issued January 1st, 2010.

© Copyright

© Copyright Queen's Printer for Ontario 2010

All rights reserved.

Questions regarding copyright, including reproduction and distribution, may be directed to the Director, Building and Development Branch of the Ministry of Municipal Affairs and Housing.

CONTENTS

1. Scope 3
2. Objectives and Functional Statements 3
3. Attribution to Acceptable Solutions 3
TABLE 7 Objectives and Functional Statements Attributed to the Acceptable Solutions in Part 7 of Division B 4

SA-1 Objectives and Functional Statements Attributed to the Acceptable Solutions

1. SCOPE

This standard specifies, for the purposes of Article 1.2.1.1. of Division A of the Building Code, the objectives and functional statements that have been attributed to acceptable solutions provided in Division B of the Building Code.

2. OBJECTIVES AND FUNCTIONAL STATEMENTS

The objectives listed in this standard are those set out in Part 2 of Division A of the Building Code.

The functional statements listed in this standard are set out in Part 3 of Division A of the Building Code.

3. ATTRIBUTION TO ACCEPTABLE SOLUTIONS

For the purposes of compliance with the Building Code, as required in Sentence 1.2.1.1.(2) of Division A of the Building Code, the objectives and functional statements attributed to the acceptable solutions in Division B shall be the objectives and functional statements listed in Tables 3 to 12.

Table 7
Objectives and Functional Statements Attributed to the Acceptable Solutions in Part 7 of Division B

Acceptable Solution	Objective and Functional Statement
7.1.1.1.	**Scope**
(1)	
7.1.2.1.	**Application**
(1)	
(2)	
7.1.3.1.	**Definitions**
(1)	
7.1.4.1.	**Facilities Required**
(1)	
7.1.4.2.	**Floor Drains**
(1)	[F62-OH1.3]
	[F62-OH2.1]
	[F62, F72-OP5]
(2)	
(3)	[F62-OH1.3]
	[F62-OH2.1] [F41-OH2.4] Applies to floor drains in garbage rooms.
	[F62, F72-OP5]
7.1.5.1.	**Sanitary Drainage Systems**
(1)	[F72-OH2.1]
(2)	[F72-OH2.1]
	[F72-OP5]
7.1.5.2.	**Storm Drainage Systems**
(1)	[F72-OP5]
7.1.5.3.	**Water Distribution Systems**
(1)	[F46, F70-OH2.2]
e_4 (2) and (3)	
m_8 **7.1.5.4.**	**Separate Services**
(1)	[F70-OH2.1] [F81-OH2.2] Applies to water service pipe. [F81-OH2.6] Applies to drainage pipe. [F81-OP5]
(2) and (3)	
(4)	[F81-OH2.2] Applies to water service pipe. [F81-OH2.6] Applies to drainage pipe. [F81-OP5]
	[F81-OP5]

Acceptable Solution	Objective and Functional Statement
7.1.5.5.	**Private Sewers and Private Water Supply**
(1)	[F62, F70-OH2.1] [F81-OH2.2] Applies to private water supply. [F81-OH2.6] Applies to private sewers.
	[F81-OP5]
7.1.6.1.	**Lighting and Ventilation Requirements**
(1)	[F30-OS3.1] Applies to the requirement for lighting.
	[F40, F41, F50-OH1.1] Applies to the requirement for ventilation.
7.1.6.2.	**Accessibility**
(1)	[F40-OH2.1] [F71-OH2.3] [F41, F81-OH2.4] [F82-OH2.1, OH2.2, OH2.3, OH2.4] Applies to the need for maintenance.
	[F81-OP5]
7.2.1.1.	**Exposure of Materials**
(1)	[F80-OH2.1, OH2.2, OH2.3, OH2.4]
	[F80-OP5]
(2)	[F80-OH2.1]
	[F80-OP5]
7.2.1.2.	**Restrictions on Re-Use**
(1)	[F41, F81-OH1.1] Applies to vent pipes. [F81-OH1.3] Applies to water pipes.
	[F81, F113-OH2.1] [F46, F70-OH2.2] [F71, F72-OH2.3] Applies to equipment.
	[F43-OS3.4] Applies to equipment.
	[F81, F113-OP5] Applies to drainage pipes. [F81-OP5] Applies to water pipes.
(2)	[F70-OH2.2]
7.2.1.3.	**Identification and Certification**
(1)	
(2)	
(3)	
(4)	
7.2.1.4.	**Pipe or Piping**
(1)	
7.2.1.5.	**Withstanding Pressure**
(1)	[F20, F81, F113-OE]
	[F20, F81, F113-OH2.1, OH2.3]
	[F20, F81, F113-OP5]
7.2.2.1.	**Surface Requirements**
(1)	[F41-OH2.4]

Acceptable Solution	Objective and Functional Statement
7.2.2.2.	**Conformance to Standards**
(1)	
(2)	[F80, F81-OH2.1, OH2.4]
	[F80, F81-OP5]
(3)	[F80, F81-OH2.1, OH2.4]
	[F80, F81-OP5]
(4)	[F80, F81-OH2.1, OH2.4]
	[F80, F81-OP5]
(5)	[F80, F81-OH2.1, OH2.4]
	[F80, F81-OP5]
(6)	[F80, F81-OH2.1, OH2.4]
	[F80, F81-OP5]
(7)	[F80, F81-OH2.1, OH2.4]
	[F80, F81-OP5]
(8)	[F80, F81-OH2.1, OH2.4]
	[F80, F81-OP5]
7.2.2.3.	**Showers**
(1)	[F80-OH2.1]
	[F80-OP5]
(2)	[F80-OH2.1, OH2.4]
	[F40-OP5]
(3)	[F45-OH2.1]
(4)	[F45-OH2.1]
7.2.2.4.	**Concealed Overflows**
(1)	[F41, F81-OH2.1, OH2.4]
7.2.2.5.	**Water Closets in Public Washrooms**
(1)	[F40-OH2.4]
7.2.2.6.	**Lavatories**
(1)	[F41, F81-OH2.1, OH2.4]
7.2.2.7.	**Trough Urinals**
(1)	[F40-OH2.1, OH2.4]
7.2.3.1.	**Traps**
(1)	[F40, F81-OH1.1]
(2)	[F44, F81-OH1.1]
(3)	[F81-OH2.1, OH2.3, OH2.4]
(4)	[F81-OH1.1]
(5)	[F81-OH1.1]
(6)	[F81-OH1.1]
(7)	
(8)	[F81-OH1.1]
	[F81-OP5]
7.2.3.2.	**Interceptors**
(1)	[F81, F82-OH2.1, OH2.3, OH2.4]

Acceptable Solution	Objective and Functional Statement
(2)	[F81-OH2.1, OH2.3, OH2.4]
7.2.3.3.	**Tubular Traps**
(1)	[F82-OH2.1, OH2.4]
	[F82-OP5]
7.2.4.1.	**T and Cross Fittings**
(1)	[F81-OH2.1, OH2.4]
	[F81-OP5]
(2)	[F81-OH2.1, OH2.4]
	[F81-OP5]
7.2.4.2.	**Sanitary T Fittings**
(1)	[F81-OH2.1, OH2.4]
	[F81-OP5]
(2)	[F81-OH2.1, OH2.4]
	[F81-OP5]
7.2.4.3.	**90° Elbows**
(1)	[F81-OH2.1, OH2.4]
	[F81-OP5]
(2)	
(3)	
7.2.4.4.	**Fittings Restricted in Use**
(1)	[F81-OH2.1, OH2.4]
	[F81-OP5]
7.2.4.5.	**Assembled Pipe or Tubing**
(1)	[F81-OH2.1, OH2.4]
	[F81-OP5]
7.2.5.1.	**Asbestos-Cement Drainage Pipe and Fittings**
(1)	[F20, F81-OH2.1, OH2.3]
	[F20, F81-OP5]
(2)	[F20, F81-OH2.1, OH2.6]
	[F20, F81-OP5]
7.2.5.2.	**Reserved.**
7.2.5.3.	**Concrete Pipe and Fittings**
(1)	[F20, F80, F81-OH2.1, OH2.6]
	[F20, F80, F81-OP5]
(2)	[F20, F80, F81-OH2.1, OH2.6]
	[F20, F80, F81-OP5]
(3)	[F20, F80, F81-OH2.1, OH2.6]
	[F20, F80, F81-OP5]
(4)	[F20, F80, F81-OH2.1, OH2.6]
	[F20, F80, F81-OP5]
(5)	[F20, F80, F81-OH2.1, OH2.6]
	[F20, F80, F81-OP5]

Acceptable Solution	Objective and Functional Statement
7.2.5.4.	**Vitrified Clay Pipe and Fittings**
(1)	[F20, F80, F81-OH2.1, OH2.6]
	[F20, F80, F81-OP5]
(2)	[F20, F80, F81-OH2.1, OH2.6]
	[F20, F80, F81-OP5]
(3)	[F20, F80, F81-OH2.1, OH2.6]
	[F20, F80, F81-OP5]
7.2.5.5.	**Polyethylene Pipe and Fittings**
(1)	[F20, F81-OH2.2]
	[F20, F81-OP5]
(2)	[F20, F81-OH2.2]
	[F20, F81-OP5]
(3)	[F20, F81-OH2.2]
	[F20, F81-OP5]
7.2.5.6.	**Polyethylene Pipe Used Underground**
(1)	[F20, F81-OH2.1, OH2.6]
	[F20, F81-OP5]
7.2.5.7.	**Crosslinked Polyethylene Pipe and Fittings**
(1)	[F20, F81-OH2.2]
	[F20, F81-OP5]
7.2.5.8.	**PVC Pipe and Fittings**
(1)	[F20, F81-OH2.2]
	[F20, F81-OP5]
(2)	[F20, F81-OH2.2]
	[F20, F81-OP5]
7.2.5.9.	**CPVC Pipe, Fittings and Solvent Cements**
(1)	[F20, F81-OH2.2]
	[F20, F81-OP5]
(2)	[F20, F81-OH2.2]
	[F20, F81-OP5]
7.2.5.10.	**Plastic Pipe, Fittings and Solvent Cement Used Underground**
(1)	[F20, F80, F81, F113-OH2.1, OH2.6]
	[F20, F80, F81, F113-OP5]
(2)	[F20, F80, F81, F113-OH2.1, OH2.6]
	[F20, F80, F81, F113-OP5]
7.2.5.11.	**Transition Solvent Cement**
(1)	[F20, F80, F81, F113-OH2.1, OH2.6]
	[F20, F80, F81, F113-OP5]
(2)	[F20, F80, F81, F113-OH2.1, OH2.6]
	[F20, F80, F81, F113-OP5]

Acceptable Solution	Objective and Functional Statement
7.2.5.12.	**Plastic Pipe, Fittings and Solvent Cement Used in Buildings**
(1)	[F20, F43, F81-OH1.1] Applies to venting system.
	[F20, F80, F81, F113-OH2.1]
	[F20, F80, F81, F113-OP5]
(2)	[F20, F80, F81-OH1.3]
	[F20, F80, F81-OP5]
(3)	[F20-OH1.3]
	[F20-OP5]
(4)	
(5)	
m_8 **7.2.5.13.**	**Polyethylene/Aluminum/Polyethylene Composite Pipe and Fittings**
(1) to (4)	[F20-OH2.1, OH2.2, OH2.3]
	[F20-OP5]
	[F20, F81-OP5]
7.2.5.14.	**Crosslinked Polyethylene/Aluminum/Polyethylene Composite Pipe and Fittings**
(1)	[F20, F81-OH2.2]
	[F20, F81-OP5]
7.2.5.15.	**Polypropylene Pipe and Fittings**
(1)	[F20, F81-OH2.2]
	[F20, F81-OP5]
7.2.6.1.	**Cast Iron Drainage and Vent Pipe and Fittings**
(1)	[F20, F43, F81-OH1.1] Applies to venting system.
	[F20, F80, F81, F113-OH2.1]
	[F20, F80, F81, F113-OP5]
(2)	[F20, F81-OH2.2]
	[F20, F81-OP5]
7.2.6.2.	**Cast Iron Fittings for Asbestos-Cement Drainage Pipe**
(1)	[F20, F80, F81, F113-OH2.1, OH2.6]
	[F20, F80, F81, F113-OP5]
7.2.6.3.	**Threaded Cast Iron Drainage Fittings**
(1)	[F20, F80, F81, F113-OH2.1, OH2.6]
	[F20, F80, F81, F113-OP5]
(2)	[F20, F81-OH2.2]
	[F20, F81-OP5]
7.2.6.4.	**Cast Iron Water Pipe**
(1)	[F20, F81-OH2.2]
	[F20, F81-OP5]
(2)	[F20, F81-OH2.2]
	[F20, F81-OP5]

Acceptable Solution	Objective and Functional Statement
(3)	[F20, F81-OH2.2]
	[F20, F81-OP5]
(4)	[F20, F81-OH2.2]
	[F20, F81-OP5]
7.2.6.5.	**Screwed Cast Iron Water Fittings**
(1)	[F20, F81-OH2.2]
	[F20, F81-OP5]
(2)	[F20, F81-OH2.2]
	[F20, F81-OP5]
(3)	[F81-OH2.1]
7.2.6.6.	**Screwed Malleable Iron Water Fittings**
(1)	[F20, F81-OH2.2]
	[F20, F81-OP5]
(2)	[F20, F81-OH2.2]
	[F20, F81-OP5]
(3)	[F81-OH2.1]
7.2.6.7.	**Steel Pipe**
(1)	[F43, F81-OH1.1] Applies to venting system.
	[F80, F81, F113-OH2.1] Applies to drainage system. [F46, F80, F81-OH2.2] Applies to water piping.
	[F80, F81, F113-OP5] Applies to drainage system. [F46, F80, F81-OP5] Applies to water piping.
(2)	
(3)	[F46, F80, F81-OH2.2]
	[F46, F80, F81-OP5]
(4)	[F43, F81-OH1.1] Applies to venting system.
	[F80, F81, F113-OH2.1] Applies to drainage system.
	[F80, F81, F113-OP5] Applies to drainage system.
(5)	[F80, F81, F113-OH2.1]
	[F80, F81, F113-OP5]
(6)	[F43, F81-OH1.1] Applies to venting system.
	[F80, F81, F113-OH2.1] Applies to drainage system.
	[F80, F81, F113-OP5] Applies to drainage system.
7.2.6.8.	**Corrugated Steel Pipe and Couplings**
(1)	[F20, F80, F81-OH1.3]
	[F20, F80, F81-OP5]
(2)	[F80, F81-OH1.3]
	[F80, F81-OP5]
(3)	[F80, F81-OH1.3]
	[F80, F81-OP5]
	(b) [F20-OH1.3]
	(b) [F20-OP5]

Acceptable Solution	Objective and Functional Statement
7.2.6.9.	**Sheet Metal Leaders**
(1)	[F80, F81-OH1.3]
	[F80, F81-OP5]
7.2.7.1.	**Copper and Brass Pipe**
(1)	[F43, F81-OH1.1] Applies to venting system.
	[F80, F81, F113-OH2.1] Applies to drainage system. [F46, F80, F81-OH2.2] Applies to water piping.
	[F80, F81, F113-OP5] Applies to drainage system. [F46, F80, F81-OP5] Applies to water piping.
(2)	[F43, F81-OH1.1] Applies to venting system.
	[F80, F81, F113-OH2.1] Applies to drainage system. [F46, F80, F81-OH2.2] Applies to water piping.
	[F80, F81, F113-OP5] Applies to drainage system. [F46, F80, F81-OP5] Applies to water piping.
7.2.7.2.	**Brass or Bronze Pipe Flanges and Flanged Fittings**
(1)	[F43, F81-OH1.1] Applies to venting system.
	[F80, F81, F113-OH2.1] Applies to drainage system. [F46, F80, F81-OH2.2] Applies to water piping.
	[F80, F81, F113-OP5] Applies to drainage system. [F46, F80, F81-OP5] Applies to water piping.
7.2.7.3.	**Brass or Bronze Threaded Water Fittings**
(1)	[F46, F80, F81-OH2.2]
	[F46, F80, F81-OP5]
(2)	[F80-OH2.1]
7.2.7.4.	**Copper Tube**
(1)	[F20, F43, F81-OH1.1] Applies to venting system.
	[F20, F80, F81, F113-OH2.1] Applies to drainage system. [F20, F46, F80, F81-OH2.2] Applies to water piping.
	[F20, F80, F81, F113-OP5] Applies to drainage system. [F20, F46, F80, F81-OP5] Applies to water piping.
(2)	[F20, F43, F81-OH1.1] Applies to venting system.
	[F20, F80, F81, F113-OH2.1] Applies to drainage system. [F20, F46, F80, F81-OH2.2] Applies to water piping.
	[F20, F80, F81, F113-OP5] Applies to drainage system. [F20, F46, F80, F81-OP5] Applies to water piping.
(3)	[F20, F46, F80, F81, F113-OH2.1, OH2.2]
	[F20, F46, F80, F81, F113-OP5]
(4)	[F20, F46, F80, F81, F113-OH2.1, OH2.2]
	[F20, F46, F80, F81, F113-OP5]
7.2.7.5.	**Solder-Joint Drainage Fittings**
(1)	[F20, F80, F81, F113-OH2.1]
	[F20, F80, F81, F113-OP5]
(2)	[F20, F80, F81-OH2.2]
	[F20, F80, F81-OP5]

Acceptable Solution	Objective and Functional Statement
7.2.7.6.	**Solder-Joint Water Fittings**
(1)	[F20, F46, F80, F81-OH2.2]
	[F20, F46, F80, F81-OP5]
(2)	[F20, F46, F80, F81-OH2.2]
	[F20, F46, F80, F81-OP5]
7.2.7.7.	**Flared-Joint Fittings for Copper Water Systems**
(1)	[F20, F46, F80, F81-OH2.2]
	[F20, F46, F80, F81-OP5]
(2)	[F20, F46, F80, F81-OH2.2]
	[F20, F46, F80, F81-OP5]
7.2.7.8.	**Lead Waste Pipe and Fittings**
(1)	[F20, F80, F81, F113-OH2.1] Applies to building sewer. [F20, F46, F80, F81-OH2.2] Applies to water piping.
	[F20, F80, F81, F113-OP5] Applies to drainage system. [F20, F46, F80, F81-OP5] Applies to water piping.
(2)	[F81, F113-OH2.1]
	[F81, F113-OP5]
7.2.8.1.	**Pipe and Fittings**
(1)	[F20, F43, F81-OH1.1] Applies to venting system.
	[F20, F80, F81, F113-OH2.1] Applies to drainage system.
	[F20, F80, F81, F113-OP5] Applies to drainage system.
7.2.9.1.	**Cement Mortar**
(1)	[F20, F43, F81-OH1.1] Applies to venting system.
	[F20, F80, F81, F113-OH2.1] Applies to drainage system. [F20, F46, F80, F81-OH2.2] Applies to water piping.
	[F20, F80, F81, F113-OP5] Applies to drainage system. [F20, F46, F80, F81-OP5] Applies to water piping.
7.2.9.2.	**Solder and Fluxes**
(1)	[F20, F43, F81-OH1.1] Applies to venting system.
	[F20, F80, F81, F113-OH2.1] Applies to drainage system. [F20, F46, F80, F81-OH2.2] Applies to water piping.
	[F20, F80, F81, F113-OP5] Applies to drainage system. [F20, F46, F80, F81-OP5] Applies to water piping.
(2)	[F46-OH2.2]
(3)	[F80-OH2.1, OH2.2]
(4)	[F20, F46, F80, F81-OH2.2] Applies to water piping.
	[F20, F80, F81, F113-OP5] Applies to drainage system. [F20, F46, F80, F81-OP5] Applies to water piping.
m_8 **7.2.10.1.**	**Floor Flanges**
(1)	[F20, F80, F81, F113-OH2.1]
	[F20, F80, F81, F113-OP5]
(2)	[F20, F80, F81, F113-OH2.1]
	[F20, F80, F81, F113-OP5]

Acceptable Solution	Objective and Functional Statement
(3)	[F20, F80, F81, F113-OH2.1]
	[F20, F80, F81, F113-OP5]
(4)	[F20, F80, F81, F113-OH2.1]
	[F20, F80, F81, F113-OP5]
7.2.10.2.	**Screws, Bolts, Nuts and Washers**
(1)	[F80-OH2.1]
	[F80-OP5]
7.2.10.3.	**Cleanout Fittings**
(1)	[F80-OH2.1, OH2.3] Applies to drainage systems. [F46-OH2.2] Applies to water systems.
(2)	[F43, F81-OH1.1] Applies to venting system.
	[F81-OH2.1] Applies to drainage system.
	[F81-OP5] Applies to drainage system.
(3)	[F80-OH2.1]
7.2.10.4.	**Mechanical Couplings**
(1)	[F20, F43, F81-OH1.1] Applies to venting system.
	[F20, F80, F81, F113-OH2.1] Applies to drainage system. [F20, F46, F80, F81-OH2.2] Applies to water piping.
	[F20, F80, F81, F113-OP5] Applies to drainage system. [F20, F46, F80, F81-OP5] Applies to water piping.
(2)	[F20, F43, F81-OH1.1] Applies to venting system.
	[F20, F80, F81, F113-OH2.1] Applies to drainage system.
	[F20, F80, F81, F113-OP5] Applies to drainage system.
7.2.10.5.	**Saddle Hubs**
(1)	[F81-OH2.1]
	[F81-OP5]
(2)	
7.2.10.6.	**Supply and Waste Fittings**
m_8 (1)	[F80-OP5]
m_8 (2)	[F80-OH2.1, OH2.3]
7.2.10.7.	**Reserved.**
7.2.10.8.	**Direct Flush Valves**
(1)	(a), (b), (c) [F130-OR1]
	(a), (b) [F80, F81-OP5]
	(c), (d) [F80-OH2.1] [F81-OH2.4]
	(d) [F46-OH2.2]
7.2.10.9.	**Drinking Fountain Bubblers**
(1)	[F40, F46-OH2.4]
(2)	[F41, F46-OH2.2]
	[F130-OR1]

Acceptable Solution	Objective and Functional Statement
7.2.10.10.	**Back-Siphonage Preventers and Backflow Preventers**
(1)	[F20, F46, F80, F81-OH2.2]
	[F20, F46, F80, F81-OP5]
(2)	[F20, F46, F80, F81-OH2.2]
	[F20, F46, F80, F81-OP5]
7.2.10.11.	**Relief Valves**
(1)	[F20, F46, F80, F81-OH2.2]
	[F20, F31, F46, F80, F81-OP5]
	[F31-OS3.2]
7.2.10.12.	**Reducing Valves**
(1)	[F20, F46, F80, F81-OH2.2]
	[F20, F46, F80, F81-OP5]
7.2.10.13.	**Solar Domestic Hot Water**
(1)	[F46-OH2.2]
	[F80, F81-OP5]
	[F81-OS3.2]
7.2.10.14.	**Vent Pipe Flashing**
(1)	[F61, F80-OH1.3]
	[F61, F80-OP2.3]
(2)	[F61, F80-OH1.3]
	[F61, F80-OP2.3]
7.2.10.15.	**Water Hammer Arresters**
(1)	[F20, F46, F80, F81-OH2.2]
	[F20, F46, F80, F81-OP5]
7.2.10.16.	**Air Admittance Valves**
(1)	[F20, F43, F81-OH1.1]
7.2.11.1.	**Design, Construction, Installation and Testing**
(1)	[F20, F46, F80, F81-OH2.2]
	[F12-OP1.4]
	[F20, F46, F80, F81-OP5]
	[F12-OS1.4]
7.2.11.2.	**Certification or Conformance**
(1)	[F20, F46, F80, F81-OH2.2]
	[F20, F46, F80, F81-OP5]
7.2.11.3.	**Tracer Wire**
(1)	[F82-OH2.2]
	[F82-OP5]
(2)	
7.2.11.4.	**Required Check Valve**
(1)	[F46-OH2.2]
(2)	[F46-OH2.2]

Acceptable Solution	Objective and Functional Statement
7.3.1.1.	**Application**
(1)	
7.3.2.1.	**Caulked Lead Drainage Joints**
(1)	[F80, F81-OH2.1] Applies to drainage system.
	[F80, F81-OP5] Applies to drainage system.
(2)	[F80-OH2.1]
(3)	[F43, F81-OH1.1] Applies to venting system.
	[F80, F81-OH2.1] Applies to drainage system.
	[F80, F81-OP5] Applies to drainage system.
(4)	[F81-OH2.1]
7.3.2.2.	**Wiped Joints**
(1)	[F43, F80, F81-OH1.1] Applies to venting system.
	[F80, F81-OH2.1] Applies to drainage system.
	[F80, F81-OP5] Applies to drainage system.
(2)	[F43, F80, F81-OH1.1] Applies to venting system.
	[F80, F81-OH2.1] Applies to drainage system.
	[F80, F81-OP5] Applies to drainage system.
(3)	[F43, F80, F81-OH1.1] Applies to venting system.
	[F80, F81-OH2.1] Applies to drainage system.
	[F80, F81-OP5] Applies to drainage system.
7.3.2.3.	**Screwed Joints**
(1)	[F81-OH2.1] Applies to drainage system. [F46, F81-OH2.2] Applies to water piping.
	[F81-OP5] Applies to drainage system.
(2)	[F46, F81-OH2.2] Applies to water piping.
7.3.2.4.	**Solder Joints**
(1)	[F43, F80, F81-OH1.1] Applies to venting system.
	[F80, F81-OH2.1] Applies to drainage system. [F20, F46, F81-OH2.2] Applies to water piping.
	[F20, F46, F81-OP5] Applies to water piping. [F20, F80, F81-OP5] Applies to drainage system.
7.3.2.5.	**Flared Joints**
(1)	[F43, F81-OH1.1] Applies to venting system.
	[F81-OH2.1] Applies to drainage system. [F20, F46, F81-OH2.2] Applies to water piping.
	[F20, F46, F81-OP5] Applies to water piping. [F20, F81-OP5] Applies to drainage system.
(2)	[F43, F81-OH1.1] Applies to venting system.
	[F81-OH2.1] Applies to drainage system. [F20, F46, F81-OH2.2] Applies to water piping.
	[F20, F46, F81-OP5] Applies to water piping. [F20, F81-OP5] Applies to drainage system.

Acceptable Solution	Objective and Functional Statement
7.3.2.6.	**Mechanical Joints**
(1)	[F43, F81-OH1.1] Applies to venting system.
	[F81-OH2.1] Applies to drainage system. [F20, F46, F81-OH2.2] Applies to water piping.
	[F20, F46, F81-OP5] Applies to water piping. [F20, F81-OP5] Applies to drainage system.
7.3.2.7.	**Cold-Caulked Joints**
(1)	[F20, F43, F81-OH1.1] Applies to bell and spigot joints in venting systems.
	[F20, F81-OH2.1] Applies to bell and spigot joints in drainage systems. [F20, F46, F81-OH2.2] Applies to water piping.
	[F20, F46, F81-OP5] Applies to water piping. [F20, F81-OP5] Applies to bell and spigot joints in drainage systems.
(2)	[F20, F43, F81-OH1.1] Applies to bell and spigot joints in venting systems.
	[F20, F81-OH2.1] Applies to bell and spigot joints in drainage systems. [F20, F46, F81-OH2.2] Applies to water piping.
	[F20, F46, F81-OP5] Applies to water piping. [F20, F81-OP5] Applies to bell and spigot joints in drainage systems.
(3)	[F20, F81-OH2.1] Applies to bell and spigot joints in drainage systems.
	[F20, F81-OP5] Applies to bell and spigot joints in drainage systems.
7.3.3.1.	**Drilled and Tapped Joints**
(1)	[F81-OH2.1] Applies to drainage piping. [F20, F46, F81-OH2.2] Applies to water piping.
	[F20, F46, F81-OP5] Applies to water piping. [F20, F81-OP5] Applies to drainage piping.
(2)	
(3)	
(4)	
(5)	[F81-OH2.1]
	[F81-OP5]
7.3.3.2.	**Reserved.**
7.3.3.3.	**Prohibition of Welding of Pipes and Fittings**
(1)	[F20-OH1.1]
	[F20-OH2.1, OH2.2]
(2)	[F80-OH2.2]
	[F80-OP5]

Acceptable Solution	Objective and Functional Statement
7.3.3.4.	**Unions and Slip Joints**
(1)	[F81-OH1.1]
	[F81-OH2.1]
(2)	[F81-OH1.1]
	[F81-OH2.1]
7.3.3.5.	**Increaser or Reducer**
(1)	[F81-OH1.1]
	[F70, F80-OH2.2]
7.3.3.6.	**Connection of Dissimilar Materials**
(1)	[F80-OH1.1]
	[F80-OH2.1]
	[F80-OP5]
7.3.3.7.	**Connection of Roof Drain to Leader**
(1)	[F21, F61, F81-OP5]
7.3.3.8.	**Connection of Floor Outlet Fixtures**
(1)	[F80-OH2.1]
	[F80-OP5]
(2)	[F80-OH2.1]
	[F80-OP5]
(3)	
(4)	[F20-OH2.1]
	[F20-OP5]
	[F20-OS3.1]
(5)	[F21-OH2.1]
	[F21-OP5]
7.3.3.9.	**Expansion and Contraction**
(1)	[F21-OH1.1]
	[F21-OH2.1] [F21-OH2.2]
	[F21-OP5]
7.3.3.10.	**Copper Tube**
(1)	[F20-OH1.1]
	[F20-OH2.1] [F20-OH2.2]
	[F20-OP5]
(2)	[F20-OH1.1]
	[F20-OH2.1] [F20-OH2.2]
	[F20-OP5]
7.3.3.11.	**Indirect Connections**
(1)	[F81-OH2.2, OH2.4]
(2)	[F81-OH2.2, OH2.4]

Acceptable Solution	Objective and Functional Statement
7.3.4.1.	**Capability of Support**
(1)	[F20-OH1.1]
	[F20-OH2.1, OH2.2]
	[F20-OP5]
	[F20-OS3.1]
(2)	[F20-OH2.1]
	[F20-OP5]
	[F20-OS3.1]
(3)	[F20-OH2.1]
	[F20-OP5]
	[F20-OS3.1]
7.3.4.2.	**Independence of Support**
(1)	[F20-OH2.1]
	[F20-OP5]
	[F20-OS3.1]
7.3.4.3.	**Insulation of Support**
(1)	[F80-OH1.1]
	[F80-OH2.1, OH2.2]
	[F80-OP5]
	[F80-OS3.1]
7.3.4.4.	**Support for Vertical Piping**
(1)	[F20-OH1.1] Applies to vent piping.
	[F20-OH2.1] Applies to drainage piping. [F20-OH2.2] Applies to water piping.
	[F20-OP5]
	[F20-OS3.1]
(2)	[F20-OH1.1] Applies to vent piping.
	[F20-OH2.1] Applies to drainage piping. [F20-OH2.2] Applies to water piping.
	[F20-OP5]
	[F20-OS3.1]
7.3.4.5.	**Support for Horizontal Piping**
(1)	[F20-OH1.1] Applies to vent piping.
	[F20, F81-OH2.1] Applies to drainage piping. [F20-OH2.2] Applies to water piping.
	[F20-OP5]
	[F20-OS3.1]
(2)	[F20-OH1.1] Applies to vent piping.
	[F20, F81-OH2.1] Applies to drainage piping. [F20-OH2.2] Applies to water piping.
	[F20-OP5]
	[F20-OS3.1]

Acceptable Solution	Objective and Functional Statement
(3)	[F20-OH1.1] Applies to vent piping.
	[F20, F81-OH2.1] Applies to drainage piping. [F20-OH2.2] Applies to water piping.
	[F20-OP5]
	[F20-OS3.1]
(4)	
(5)	[F20-OH1.1] Applies to vent piping.
	[F20, F81-OH2.1] Applies to drainage piping. [F20-OH2.2] Applies to water piping.
	[F20-OP5]
	[F20-OS3.1]
(6)	[F20-OH1.1] Applies to vent piping.
	[F20, F81-OH2.1] Applies to drainage piping. [F20-OH2.2] Applies to water piping.
	[F20-OP5]
	[F20-OS3.1]
7.3.4.6.	**Support for Underground Horizontal Piping**
(1)	[F20-OE] Applies to drainage piping.
	[F20, F81-OH2.1] Applies to drainage piping. [F20-OH2.2] Applies to water piping.
	[F20-OP5]
	[F20-OS3.1]
(2)	[F20-OE] Applies to drainage piping.
	[F20-OH1.1] Applies to vent piping.
	[F20, F81-OH2.1] Applies to drainage piping. [F20-OH2.2] Applies to water piping.
	[F20-OP5]
	[F20-OS3.1]
7.3.4.7.	**Support for Vent Pipe Above a Roof**
(1)	[F20-OH1.1]
	[F61, F81-OP2.3]
	[F81-OS3.1]
7.3.4.8.	**Compression Fittings**
(1)	[F20-OH2.1, OH2.2]
	[F20-OP5]
	[F20-OS3.1]
7.3.4.9.	**Thrust Restraint of Water Service Pipes**
(1)	[F20, F81-OH2.2]
	[F20, F81-OP5]
(2)	[F20, F81-OH2.2]
(3)	[F20, F81-OH2.2]
(4)	[F20, F81-OH2.2]

Acceptable Solution	Objective and Functional Statement
7.3.5.1.	**Backfill of Pipe Trench**
(1)	[F20-OE]
	[F81-OH2.1]
	[F81-OP5]
7.3.5.2.	**Protection of Non-Metallic Pipe**
(1)	[F20-OE]
	[F81-OH2.1]
	[F81-OP5]
7.3.5.3.	**Isolation from Loads**
(1)	[F20-OE] Applies to underground drainage piping.
	[F81-OH2.1]
	[F81-OP5]
7.3.5.4.	**Protection from Frost**
(1)	[F20-OE] Applies to underground drainage piping.
	[F81-OH2.1]
	[F81-OP5]
7.3.5.5.	**Protection from Mechanical Damage**
(1)	[F81-OH1.1] Applies to venting system.
	[F81-OH2.1] Applies to drainage system. [F81-OH2.2] Applies to water system.
	[F81-OP5]
7.3.5.6.	**Protection from Condensation**
(1)	[F63-OH2.4]
	[F63-OP2.3]
m_s **7.3.5.7.**	**Spatial Separation**
(1)	[F46-OH2.2]
	[F46-OP5]
(2)	[F46-OH2.2]
	[F46-OP5]
(3)	
(4)	[F46-OH2.2]
	[F46-OP5]
	[F46-OP5]
7.3.6.1.	**Tests and Inspection of Drainage or Venting Systems**
(1)	[F81-OH1.1] Applies to venting systems.
	[F81-OH2.1] Applies to drainage systems.
	[F81-OP5] Applies to drainage systems.
(2)	[F81-OH1.1] Applies to venting systems.
	[F81-OH2.1] Applies to drainage systems.
	[F81-OP5] Applies to drainage systems.
(3)	[F81-OH1.1] Applies to venting systems.
	[F81-OH2.1] Applies to drainage systems.
	[F81-OP5] Applies to drainage systems.

Acceptable Solution	Objective and Functional Statement
(4)	[F81-OH1.1] Applies to venting systems.
	[F81-OH2.1] Applies to drainage systems.
	[F81-OP5] Applies to drainage systems.
(5)	[F81-OH2.1] Applies to drainage systems.
7.3.6.2.	**Tests of Pipes in Drainage Systems**
(1)	[F81-OE] Applies to underground drainage piping.
	[F81-OH2.1]
	[F81-OP5] Applies to drainage systems.
7.3.6.3.	**Tests of Venting Systems**
(1)	[F81-OH1.1]
7.3.6.4.	**Water Tests in Drain, Waste and Vent Systems**
(1)	[F81-OH1.1] Applies to venting systems.
	[F81-OH2.1] Applies to drainage systems.
	[F81-OP5] Applies to drainage systems.
(2)	[F81-OH1.1] Applies to venting systems.
	[F81-OH2.1] Applies to drainage systems.
	[F81-OP5] Applies to drainage systems.
7.3.6.5.	**Air Tests**
(1)	[F81-OH1.1] Applies to venting systems.
	[F81-OH2.1] Applies to drainage systems.
	[F81-OP5] Applies to drainage systems.
7.3.6.6.	**Final Tests**
(1)	[F81-OH1.1] Applies to venting systems.
	[F81-OH2.1] Applies to drainage systems.
	[F81-OP5] Applies to drainage systems.
(2)	
7.3.6.7.	**Ball Tests**
(1)	[F81-OH2.1]
(2)	[F81-OH2.1]
7.3.7.1.	**Application of Tests**
(1)	[F81-OP5]
(2)	
(3)	[F81-OP5]
(4)	[F81-OP5]
7.3.7.2.	**Tests of Potable Water Systems**
(1)	[F20-OP5]
7.3.7.3.	**Water Tests**
(1)	[F81-OP5]
(2)	[F46-OH2.2]
7.4.1.1.	**Application of Drainage Systems**
(1)	

Acceptable Solution	Objective and Functional Statement
7.4.2.1.	**Connections to Sanitary Drainage Systems**
(1)	[F81-OH1.1]
	[F41, F43-OH2.1, OH2.4]
(2)	[F81-OH1.1]
	[F43-OH2.1, OH2.4]
(3)	[F81-OH1.1]
(4)	[F81-OH1.1]
	[F81-OH2.1]
7.4.2.2.	**Connection of Overflows from Rainwater Tanks**
(1)	[F40-OE]
7.4.2.3.	**Direct Connections**
(1)	[F81-OH2.1]
(2)	[F81-OH2.1, OH2.4]
(3)	[F81-OH2.4]
(4)	[F81-OH2.4]
7.4.3.1.	**Plumbing Fixtures**
(1)	[F41-OH1.1]
	[F40, F41-OH2.1, OH2.4]
	[F80-OP2.3]
7.4.3.2.	**Restricted Locations of Indirect Connections and Traps**
(1)	[F81-OH2.1, OH2.4]
7.4.3.3.	**Equipment Restrictions Upstream of Interceptors**
(1)	[F81-OH2.1]
(2)	
7.4.3.4.	**Fixtures Located in Chemical Storage Locations**
(1)	[F44-OE]
	[F44-OH5]
	[F01-OP1.1]
	[F81-OP2.3]
	[F01, F81-OS1.1]
	[F32-OS3.3] [F44-OS3.4]
7.4.3.5.	**Macerating Toilet**
(1)	[F72-OH2.3]
7.4.3.6.	**Drains Serving Elevator Pits**
(1)	[F43-OH1.1]
	[F43-OH2.1]
	[F62-OP2.3]
	[F62-OP5]

Acceptable Solution	Objective and Functional Statement
7.4.4.1.	**Sewage Treatment**
(1)	[F81-OE] Applies to underground drainage piping.
	[F81-OH2.1]
	[F81-OP2.3]
	[F81-OP5]
	[F44-OS3.4]
7.4.4.2.	**Protection for Drainage System**
(1)	[F81-OE] Applies to underground drainage piping.
	[F81-OH2.1]
	[F81-OH5]
7.4.4.3.	**Interceptors**
(1)	[F81, F112-OE]. [F111-OE] Applies to drainage systems served by a sewage system.
	[F81-OH2.1]
(2)	[F44, F81, F112-OE]. [F111-OE] Applies to drainage systems served by a sewage system.
	[F81-OH2.1]
	[F44-OH5]
	[F01-OP1.1]
	[F01-OS1.1]
(3)	
(4)	[F81-OH2.1]
	[F111-OE] Applies to drainage systems served by a sewage system.
(5)	[F44-OE] Applies to oil interceptors. [F81, F112-OE] [F111-OE] Applies to drainage systems served by a sewage system.
	[F81-OH2.1]
	[F44-OH5] Applies to oil interceptors.
	[F01-OP1.1] Applies to oil interceptors.
	[F01-OS1.1] Applies to oil interceptors.
(6)	[F44-OE] Applies to oil interceptors. [F81, F112-OE] [F111-OE] Applies to drainage systems served by a sewage system.
	[F81-OH2.1]
	[F44-OH5] Applies to oil interceptors.
	[F01-OP1.1] Applies to oil interceptors.
	[F01-OS1.1] Applies to oil interceptors

Acceptable Solution	Objective and Functional Statement
(7)	[F81, F112-OE] [F111-OE] Applies to drainage systems served by a sewage system.
	[F81-OH2.1]
(8)	[F81, F112-OE] [F111-OE] Applies to drainage systems served by a sewage system.
	[F81-OH2.1]
(9)	[F44-OE] Applies to oil interceptors [F81, F112-OE] [F111-OE] Applies to drainage systems served by a sewage system.
	[F81-OH2.1]
	[F44-OH5] Applies to oil interceptors.
	[F01-OP1.1] Applies to oil interceptors.
	[F01-OS1.1] Applies to oil interceptors.
(10)	
7.4.4.4.	**Neutralizing and Dilution Tanks**
(1)	[F40-OE]
	[F80-OH2.1]
	[F40-OH5]
	[F81-OP2.3]
	[F80-OP5]
	[F40, F80-OS3.4]
(2)	[F40-OE]
	[F80-OH2.1]
	[F40-OH5]
	[F81-OP2.3]
	[F80-OP5]
	[F40, F80-OS3.4]
7.4.5.1.	**Traps for Sanitary Drainage Systems**
(1)	[F81-OH1.1]
	[F42-OH2.5]
(2)	
(3)	
(4)	
(5)	[F81-OH1.1]
(6)	[F81-OH1.1]
	[F42-OH2.5]
7.4.5.2.	**Traps for Storm Drainage Systems**
(1)	[F81-OH1.1]

Acceptable Solution	Objective and Functional Statement
7.4.5.3.	**Connection of Subsoil Drainage Pipe to a Sanitary Drainage System**
(1)	[F40-OH1.1]
	[F40-OH2.1]
(2)	
(3)	[F81-OH1.1]
	[F81-OH2.1]
7.4.5.4.	**Location and Cleanout for Building Traps**
(1)	[F81-OH2.1]
7.4.5.5.	**Trap Seals**
(1)	[F81-OH1.1]
	[F42-OH2.5]
(2)	[F81-OH1.1]
	[F42-OH2.5]
7.4.6.1.	**Separate Systems**
(1)	[F40-OR1]
(2)	[F81-OH1.1]
	[F41, F81-OH2.1]
7.4.6.2.	**Location of Soil or Waste Pipes**
(1)	[F81-OH2.1, OH2.2, OH2.4]
	(a), (b) [F46-OH2.2]
7.4.6.3.	**Sumps or Tanks**
(1)	[F81-OH2.1]
(2)	[F81-OH1.1]
	[F81-OH2.1]
(3)	[F72-OH2.1]
	[F81-OH2.1]
(4)	[F81-OH2.1]
(5)	[F81-OH2.1]
(6)	[F81-OH2.1]
(7)	[F81-OH2.1]
(8)	[F81-OH2.1]
7.4.6.4.	**Protection from Backflow**
(1)	[F81-OH1.1]
	[F81-OH2.1]
(2)	[F81-OH1.1]
	[F81-OH2.1]
(3)	[F81-OH2.1]
(4)	
(5)	[F40-OH1.1]
	[F40-OH2.1]
7.4.6.5.	**Mobile Home Sewer Service**
(1)	[F81-OH2.1]

Acceptable Solution	Objective and Functional Statement
7.4.6.6.	**Building Drain Ends**
(1)	
7.4.7.1.	**Cleanouts for Drainage Systems**
(1)	[F81-OH2.1]
(2)	[F81-OH2.1]
(3)	[F81-OH2.1]
(4)	[F81-OH2.1]
(5)	[F81-OH2.1]
(6)	[F81-OH2.1]
(7)	[F81-OH2.1]
(8)	[F81-OH2.1]
(9)	[F81-OH2.1]
(10)	[F81-OH2.1]
7.4.7.2.	**Size and Spacing of Cleanouts**
(1)	[F81-OH2.1]
(2)	[F81-OH2.1]
(3)	[F81-OH2.1]
(4)	[F81-OH2.1]
(5)	[F81-OH2.1]
(6)	[F81-OH2.1]
7.4.7.3.	**Manholes**
(1)	[F20-OS3.1]
(2)	(a), (c) [F81-OH1.1]
	(a), (c) [F81-OS1.1]
	(b), [F20, F30, F80-OS3.1]
(3)	[F30-OS3.1] [F36-OS3.6]
(4)	[F81-OH2.1]
7.4.7.4.	**Location of Cleanouts**
(1)	[F81-OH2.1]
(2)	[F81-OH1.1]
	[F30-OS3.1]
(3)	
(4)	[F81-OH2.1]
(5)	[F81-OH2.1]
(6)	[F43-OH2.1]
	[F43-OH5]
7.4.8.1.	**Minimum Slope**
(1)	[F81-OH2.1]
(2)	
(3)	[F81-OH2.1]
7.4.8.2.	**Length of Fixture Outlet Pipes**
(1)	[F81-OH1.1]

Acceptable Solution	Objective and Functional Statement
7.4.9.1.	**No Reduction in Size**
(1)	[F81-OH2.1]
(2)	[F81-OH2.1]
(3)	
7.4.9.2.	**Serving Water Closets**
(1)	[F81-OH2.1]
(2)	[F81-OH2.1]
(3)	[F81-OH2.1]
(4)	[F81-OH2.1]
7.4.9.3.	**Size of Fixture Outlet Pipes**
(1)	[F81-OH2.1]
(2)	[F81-OH2.1]
(3)	[F81-OH1.1]
	[F81-OP5]
7.4.9.4.	**Minimum Size of Building Drains and Sewers**
(1)	[F81-OH2.1]
(2)	[F81-OH2.1]
7.4.10.1.	**Total Load on a Pipe**
(1)	
7.4.10.2.	**Hydraulic Loads for Fixtures**
(1)	
(2)	
7.4.10.3.	**Hydraulic Loads from Fixtures with Continuous or Semi-continuous Flow**
(1)	
(2)	
(3)	
7.4.10.4.	**Hydraulic Loads from Roofs or Paved Surfaces**
(1)	
(2)	[F20, F81-OP5]
	(a), (d), (e) [F41, F81-OH2.4, OH2.5]
	(b), (c) [F20, F81-OS2.1]
7.4.10.5.	**Conversion of Fixture Units to Litres and Gal/min**
(1)	
(2)	
7.4.10.6.	**Hydraulic Loads to Soil or Waste Pipes**
(1)	[F81-OH2.1]
(2)	[F81-OH2.1]
(3)	[F81-OH2.1]
(4)	[F81-OH2.1]
7.4.10.7.	**Hydraulic Loads on Branches**
(1)	[F81-OH2.1]

Acceptable Solution	Objective and Functional Statement
7.4.10.8.	**Hydraulic Loads on Sanitary Horizontal Drain**
(1)	[F81-OH2.1]
(2)	[F81-OH2.1]
7.4.10.9.	**Hydraulic Loads on Horizontal Storm Drains**
(1)	[F81-OH2.1]
7.4.10.10.	**Rain Leaders**
(1)	
(2)	[F62, F81-OH1.3]
(3)	[F62, F81-OH1.3]
7.5.1.1.	**Venting for Traps**
(1)	[F81-OH1.1]
(2)	[F81-OH1.1]
(3)	
(4)	
7.5.2.1.	**Wet Venting**
(1)	[F40, F81-OH1.1]
7.5.3.1.	**Circuit Venting**
(1)	[F40, F81-OH1.1]
(2)	[F40, F81-OH1.1]
(3)	[F40, F81-OH1.1]
(4)	[F40, F81-OH1.1]
(5)	[F40, F81-OH1.1]
(6)	[F40, F81-OH1.1]
(7)	[F40, F81-OH1.1]
(8)	[F40, F81-OH1.1]
(9)	[F40, F81-OH1.1]
(10)	[F40, F81-OH1.1]
(11)	
7.5.4.1.	**Stack Vents**
(1)	[F40, F81-OH1.1]
7.5.4.2.	**Vent Stacks**
(1)	[F40, F81-OH1.1]
(2)	
(3)	[F40, F81-OH1.1]
(4)	[F40, F81-OH1.1]
7.5.4.3.	**Yoke Vents**
(1)	[F40, F81-OH1.1]
(2)	[F40, F81-OH1.1]
(3)	[F40, F81-OH1.1]
(4)	
7.5.4.4.	**Offset Relief Vents**
(1)	[F40, F81-OH1.1]

Acceptable Solution	Objective and Functional Statement
7.5.4.5.	**Fixtures Draining into Vent Pipes**
(1)	[F40, F81-OH1.1]
7.5.5.1.	**Venting of Sanitary Sewage Sumps**
(1)	[F40, F81-OH1.1]
7.5.5.2.	**Venting of Interceptors**
(1)	[F40, F81-OH1.1]
	[F81-OH2.1]
	[F01, F40, F81-OP1.1]
	[F01, F40, F81-OS1.1]
(2)	[F40, F81-OH1.1]
	[F81-OH2.1]
	[F01, F40, F81-OP1.1]
	[F01, F40, F81-OS1.1]
(3)	[F40, F81-OH1.1]
	[F01, F40, F81-OP1.1]
	[F01, F40, F81-OS1.1]
(4)	[F40, F81-OH1.1]
	[F01, F40, F81-OP1.1]
	[F01, F40, F81-OS1.1]
(5)	[F40, F81-OH1.1]
	[F01, F40, F81-OP1.1]
	[F01, F40, F81-OS1.1]
(6)	[F40, F81-OH1.1]
	[F81-OH2.1]
(7)	[F40, F81-OH1.1]
	[F81-OH2.1]
(8)	[F40, F81-OH1.1]
	[F81-OH2.1]
	[F01, F40, F81-OP1.1]
	[F01, F40, F81-OS1.1]
7.5.5.3.	**Venting of Corrosive Drain Piping and Dilution Tanks**
(1)	[F81-OS3.4]
7.5.5.4.	**Fresh Air Inlets**
(1)	[F81-OH1.1]
7.5.5.5.	**Provision for Future Installations**
(1)	[F81-OH1.1] Applies to venting systems.
	[F81-OH2.1] Applies to drainage systems.
(2)	[F40, F81-OH1.1]
7.5.6.1.	**Drainage of Vent Pipes**
(1)	[F81-OH1.1]
(2)	[F81-OH1.1]
7.5.6.2.	**Vent Pipe Connections**
(1)	[F81-OH1.1]

Acceptable Solution	Objective and Functional Statement
(2)	[F81-OH1.1]
(3)	[F40, F81-OH1.1]
7.5.6.3.	**Location of Vent**
(1)	[F81-OH1.1]
(2)	[F81-OH2.1]
(3)	[F81-OH1.1]
(4)	[F40, F81-OH1.1]
(5)	
7.5.6.4.	**Connection of Vents above Fixtures Served**
(1)	[F81-OH1.1]
(2)	[F81-OH1.1]
7.5.6.5.	**Terminals**
(1)	[F81-OH1.1]
(2)	[F81-OH1.1]
(3)	
(4)	[F81-OH1.1]
(5)	[F81-OH1.1]
(6)	[F81-OH1.1]
(7)	[F20, F81-OH1.1]
(8)	[F61, F80-OH1.3]
	[F61, F80-OP2.3]
(9)	[F61-OH1.3]
	[F61-OP2.3]
(10)	[F81-OH1.1]
7.5.7.1.	**General**
(1)	[F81-OH1.1]
7.5.7.2.	**Size Restriction**
(1)	[F81-OH1.1]
(2)	[F81-OH1.1]
(3)	[F81-OH1.1]
7.5.7.3.	**Additional Circuit Vents and Relief Vents**
(1)	
(2)	[F81-OH1.1]
7.5.7.4.	**Offset Relief Vents**
(1)	[F81-OH1.1]
7.5.7.5.	**Yoke Vents**
(1)	[F81-OH2.1]
7.5.7.6.	**Vent Pipes for Manholes**
(1)	[F81-OH2.1]
7.5.7.7.	**Vents for Sanitary Sewage Sumps or Tanks, Dilution Tanks and Macerating Toilet Systems**
(1)	[F81-OH2.1]
(2)	[F81-OH2.1]

Acceptable Solution	Objective and Functional Statement
(3)	[F81-OH1.1]
7.5.8.1.	**Hydraulic Loads Draining to Wet Vents**
(1)	[F81-OH1.1]
(2)	[F81-OH1.1]
7.5.8.2.	**Individual Vents and Dual Vents**
(1)	[F81-OH1.1]
(2)	
7.5.8.3.	**Branch Vents, Headers, Continuous Vents and Circuit Vents**
(1)	[F81-OH1.1]
(2)	
(3)	
(4)	
(5)	
7.5.8.4.	**Vent Stacks or Stack Vents**
(1)	[F81-OH1.1]
(2)	
(3)	[F81-OH1.1]
(4)	[F81-OH1.1]
(5)	[F81-OH1.1]
7.5.8.5.	**Lengths for other Vent Pipes**
(1)	
7.5.9.1.	**Air Admittance Valve as a Vent Terminal**
(1)	
7.5.9.2.	**Air Admittance Valves**
(1)	[F40, F81-OH1.1]
	(a) [F140-OC]
(2)	[F40, F81-OH1.1]
(3)	[F40, F81-OH1.1]
7.5.9.3.	**Installation Conditions**
(1)	[F40, F81-OH1.1]
(2)	[F40, F81-OH1.1]
(3)	[F40, F81-OH1.1]
(4)	[F40, F81-OH1.1]
(5)	[F40, F81-OH1.1]
7.6.1.1.	**Design, Fabrication and Installation**
(1)	[F70-OH2.2]
(2)	[F31-OS3.2]
(3)	[F31-OS3.2]
(4)	[F71-OH2.3]
7.6.1.2.	**Drainage**
(1)	[F81-OP5]
7.6.1.3.	**Control and Shut-off Valves**
(1)	[F81-OP5]

Acceptable Solution	Objective and Functional Statement
(2)	[F81-OP5]
(3)	[F81-OP5]
(4)	[F81-OP5]
(5)	[F81-OP5]
(6)	[F81-OP5]
7.6.1.4.	**Shut-off Valves**
(1)	[F81-OP5]
7.6.1.5.	**Water Closets**
(1)	[F81-OP5]
7.6.1.6.	**Suites**
(1)	[F70-OH2.2]
	[F81-OP5]
7.6.1.7.	**Public Washrooms**
(1)	[F81-OP5]
7.6.1.8.	**Tanks**
(1)	[F81-OP5]
7.6.1.9.	**Protection for Exterior Water Supply**
(1)	[F81-OP5]
7.6.1.10.	**Check Valves**
(1)	[F20, F81-OP5]
7.6.1.11.	**Flushing Devices**
(1)	[F72-OH2.1]
(2)	[F72-OH2.1]
7.6.1.12.	**Relief Valves**
(1)	[F20, F81-OP1.1]
	[F20, F81-OS1.1]
	[F20, F81-OS2.3]
	[F31, F81-OS3.2] Applies to pressure vessels containing hot water.
(2)	[F20, F81-OP1.1]
	[F20, F81-OS1.1]
	[F20, F81-OS2.3]
	[F31, F81-OS3.2]
(3)	
(4)	[F20, F81-OP1.1] [F20, F81-OS1.1] [F20, F81-OS2.3] (b) [F31, F81-OS3.2]
(5)	[F20, F81-OP1.1]
	[F20, F81-OS1.1]
	[F20, F81-OS2.3]
	[F31, F81-OS3.2]
	(b) [F81-OH2.2] Applies to the size of air break.

Acceptable Solution	Objective and Functional Statement
(6)	[F20, F81-OP1.1]
	[F20, F81-OS1.1]
	[F20, F81-OS2.3]
	[F31, F81-OS3.2]
(7)	[F20, F81-OP1.1]
	[F20, F81-OS1.1]
	[F20, F81-OS2.3]
	[F31, F81-OS3.2]
7.6.1.13.	**Solar Domestic Hot Water Systems**
(1)	[F70-OH2.2]
	[F20-OS2.2, OS2.3]
	[F31-OS3.2] [F81-OS3.4]
(2)	[F61-OH1.3]
	[F70-OH2.2]
	[F20-OS2.2, OS2.3]
	[F31-OS3.2] [F81-OS3.4]
7.6.1.14.	**Water Hammer**
(1)	[F20-OH4]
	[F20, F81-OP5]
	[F20, F81-OS3.2]
7.6.1.15.	**Mobile Home Water Service**
(1)	[F46, F70-OH2.2]
7.6.1.16.	**Thermal Expansion**
(1)	[F20, F46, F81-OP5]
7.6.2.1.	**Connection of Systems**
(1)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(2)	[F46, F70, F81-OH2.2]
7.6.2.2.	**Back Siphonage**
(1)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(2)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(3)	[F81-OH2.1] [F46, F70, F81-OH2.2]
7.6.2.3.	**Reserved.**
7.6.2.4.	**BackFlow from Fire Protection Systems.**
(1)	
(2)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(3)	[F02, F12, F81-OP1.2]
	[F02, F12, F81-OS1.2]
(4)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(5)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(6)	
(7)	
(8)	
(9)	[F81-OH2.1] [F46, F70, F81-OH2.2]

Acceptable Solution	Objective and Functional Statement
m_5 **7.6.2.5.**	**Backflow from Buildings with a Solar Domestic Hot Water System**
(1)	[F70, F81, F46-OH2.1, OH 2.2, OH2.3]
(2) to (4)	
7.6.2.6.	**Reserved.**
7.6.2.7.	**Reserved.**
7.6.2.8.	**Cleaning of Systems**
(1)	[F81-OH2.1] [F46, F70, F81-OH2.2]
7.6.2.9.	**Air Gap**
(1)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(2)	[F81-OH2.1] [F46, F70, F81-OH2.2]
7.6.2.10.	**Vacuum Breakers and Flood Levels**
(1)	
(2)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(3)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(4)	[F81-OH2.1] [F46, F70, F81-OH2.2]
7.6.3.1.	**Design**
(1)	[F70, F81-OH2.2]
(2)	
(3)	
(4)	[F70, F81-OH2.2]
(5)	[F70, F81-OH2.2] [F40-OH2.1, OH2.4]
7.6.3.2.	**Hydraulic Load**
(1)	[F70, F81-OH2.2]
(2)	[F70, F81-OH2.2]
(3)	[F70, F81-OH2.2]
7.6.3.3.	**Static Pressure**
(1)	[F20, F81-OP1.1]
	[F20, F81-OP5]
	[F20, F81-OS1.1]
	[F20, F81-OS2.3]
	[F31, F81-OS3.2] Applies to pipes containing hot water
7.6.3.4.	**Size**
(1)	[F70, F81-OH2.2]
7.6.4.1.	**Water Supply Fittings**
(1)	[F130-OR1]
(2)	
7.6.4.2.	**Plumbing Fixtures**
(1)	[F130-OR1]
(2)	[F130-OR1]
(3)	[F130-OR1]
(4)	

Acceptable Solution	Objective and Functional Statement
7.6.5.1.	**Maximum Temperature of Hot Water**
(1)	[F31-OS3.2]
(2)	[F31-OS3.2]
7.6.5.2.	**Showers**
(1)	[F31-OH1.2]
	[F30-OS3.1] [F31-OS3.2]
(2)	
(3)	
(4)	[F31-OH1.2]
	[F31-OS3.2]
7.6.5.3.	**Temperature Control Devices**
(1)	[F31-OH1.2]
	[F31-OS3.2]
7.7.1.1.	**Non-Potable Connection**
(1)	[F46-OH2.2]
7.7.2.1.	**Markings Required**
(1)	[F46, F81-OH2.2]
7.7.3.1.	**Pipes**
(1)	[F81-OH2.1, OH2.2, OH2.4]
	(c), (d) [F46-OH2.2]
7.7.3.2.	**Outlets**
(1)	[F46-OH2.2] [F40-OH2.4]

Ministry of Municipal Affairs and Housing
Building and Development Branch

Ontario

Supplementary Standard SC-1

Code of Conduct for Registered Code Agencies

August 15, 2006

COMMENCEMENT

Supplementary Standard SC-1 comes into force on the 31st day of December, 2006.

© Copyright

© Copyright Queen's Printer for Ontario 2006

All rights reserved.

Questions regarding copyright, including reproduction and distribution, may be directed to the Director, Building and Development Branch of the Ministry of Municipal Affairs and Housing.

SC-1 Code of Conduct for Registered Code Agencies

1. Standards

A registered code agency shall at all times undertake its responsibilities in a professional manner, and in conformance with the provisions of the Building Code Act, 1992, the building code, and all applicable legislation.

Building code provisions which contain requirements pertaining to the conduct of a registered code agency, include:

Division C	Requirements
Sentence 3.4.3.9.(2)	Suspension, Revocation, Refusal to Register or Renew a Registration
Subsection 3.7.2.	When a Registered Code Agency may not be Appointed or Continue to Act under an Appointment
Sentence 3.7.4.1.(1)	Manner in which a Registered Code Agency shall Perform Functions
Article 3.7.4.3.	Issuance of Certificates by Registered Code Agencies
Article 3.7.4.4.	Issuance of Orders by Registered Code Agencies
Article 3.7.4.5.	Authorized Persons
Article 3.7.4.6.	Prohibition
Article 3.7.4.7.	Information and Records
Sentence 3.7.6.2.(1)	Information to be Provided by a Registered Code Agency to the Director
Article 3.7.6.3.	Information to be Provided by a Registered Code Agency to the Chief Building Official
Subsection 3.7.7.	Referral of Stop Work Order
Column 1	2

2. Application

A registered code agency shall ensure that its officers, directors, employees and other persons engaged to perform functions on behalf of the registered code agency, perform their functions in a manner consistent with the code of conduct.

3. Respect

A registered code agency, while carrying out its functions under an appointment, shall treat persons applying for or holding permits under section 8 of the Building Code Act, as well as persons responsible for design activities, persons engaged in construction, and other persons with whom a registered code agency may come into contact in the course of carrying out its responsibilities, with respect, by being courteous at all times and in all situations.

Index(1)

(1) Items contained in the Index are referenced to the numbering system used in this Code and Guide for Plumbing instead of to page numbers. For more information on the numbering system, refer to the "Preface" at the front of the document.

References occur in Division B unless noted as follows:

[A] - references occur in Division A
[C] - references occur in Division C

A

Abbreviations
  e_3 proper names, 1.3.2.1.
  symbols and other abbreviations, 1.4.2.1.[A]
ABS pipe, 7.2.5.10., 7.2.5.12., 7.3.4.5.(2)
Air Admittance Valves, 7.2.10.16., 7.5.9.
Air break, 1.4.1.2. of Div. A, 7.3.3.11., 7.4.2.1.(1)(h), 7.4.2.3.
Air gap, 1.4.1.2. of Div. A, 7.6.2.9.
Air test, 7.3.6.1.(1), 7.3.6.5., 7.3.7.1.
Ancillary buildings, 7.1.5.4.
Application of Part 7, 7.1.2.1., 7.1.4.1.
Asbestos-cement pipe and fittings, 7.2.5.1., 7.3.4.5.(2), 7.3.5.2.

B

Backfill for piping, 7.3.5.1.
  protection from, 7.3.5.2.
Backflow
  definition, 1.4.1.2. of Div. A
  preventers, 1.4.1.2. of Div. A, 7.6.2., 7.2.10.10.
  protection from, 7.4.6.4., 7.6.2.4.
Back-siphonage
  definition, 1.4.1.2. of Div. A
  preventers, 1.4.1.2. of Div. A, 7.2.10.10., 7.6.2.2.
  prevention, 7.6.2.
Backwater valves, 1.4.1.2. of Div. A, 7.4.6.4.
Ball tests, 7.3.6.1.(5), 7.3.6.7.
Branches
  definition, 1.4.1.2. of Div. A
  serving water closets, 7.4.9.2.(2)
Branch vents, 1.4.1.2. of Div. A, 7.5.7.2., 7.5.8.3.
Brass floor flanges, 7.2.10.1.
Brass pipe, 7.2.7.1.(2), 7.3.4.5.(2)
  flanges and fittings, 7.2.7.2., 7.2.7.3.
Bronze pipe flanges and fittings, 7.2.7.2., 7.2.7.3.
Building drains
  cleanout for, 7.4.7.1.
  combined, 7.1.5.1.(2)
  definition, 1.4.1.2. of Div. A
  end of, 7.4.6.6., 7.5.7.2., 7.5.8.4.
  hydraulic loading, 7.4.10.8.
  protection from backflow, 7.4.6.4.
  protection from damage, 7.3.5.
  sizing, 7.4.9.2.(2), 7.4.9.4., Table 7.4.10.8.
Building sewers
  cleanouts for, 7.4.7.
  combined, 7.1.5.1.(2)
  definition, 1.4.1.2. of Div. A
  developed length of, 7.4.7.2.(3)
  sizing, 7.4.9.4., Table 7.4.10.8.
  sloping, 7.4.7.2., Table 7.4.10.8.
Building traps, 7.4.5.4.
  cleanout for, 7.4.5.4.
  definition, 1.4.1.2. of Div. A
  fresh air inlets for, 7.5.5.4.
  location of, 7.4.5.4.

C

Cast iron soil pipe and fittings, 7.2.6.1., 7.2.6.2., 7.3.3.3., 7.3.4.5.(2)
Cast iron water pipe and fittings, 7.2.6.4., 7.2.6.5., 7.3.4.5.(2)
Caulked lead drainage joints, 7.3.2.1.
Caulking compounds, cold, 7.3.2.7.
Cement jointing mortar, 7.2.9.1.
Cement-mortar pipe lining, 7.2.6.4.(2)
Check valves, 1.4.1.2. of Div. A, 7.2.11.4., 7.4.6.3.(6), 7.6.1.10., 7.6.2.4.
Chlorinated poly (vinyl chloride) CPVC pipe and fittings, 7.2.5.9.
Circuit vents, 1.4.1.2. of Div. A, 7.4.2.1.(1), 7.5.3.1., 7.5.7.3., 7.5.8.3.
Cleaning of water systems, 7.6.2.8.
Cleanout
  definition, 1.4.1.2. of Div. A
  fittings, 7.2.10.3.(2), 7.4.7.1.(2)
  for traps, 7.2.3.1.(3), 7.4.5.4., 7.4.7.1.(2)
  installation of, 7.4.7.
  location of, 7.4.5.3., 7.4.7.1., 7.4.7.4.
  manhole as, 7.4.7.1.(4)
  rodding of, 7.4.7.2.(4), 7.4.7.4.(1)
  size and spacing of, 7.4.7.2.
Clear water waste, 1.4.1.2. of Div. A, 7.1.4.2., 7.4.2.1.(1)(c), 7.4.4.2.
Cold caulked joints, 7.3.2.7.
Combined temperature and pressure relief valves, 7.2.10.11., 7.6.1.12.(5)
Combustible piping, 7.2.5.12.(4)
Compounds, caulking and sealing, 7.3.2.7., 7.3.3.8.
Concrete pipe and fittings, 7.2.5.3.
Connections
  direct, 7.3.3.5., 7.4.2.1.(1), 7.4.2.3.
  dissimilar material, 7.3.3.6.
  fixture, 7.4.2.1.
  indirect, 7.4.2.1.(1), 7.4.3.2., 7.3.3.11.
  of subsoil drainage, 7.4.5.3.
  roof drain, 7.3.3.7.
  running thread and packing nut, 7.3.3.4.
  service, 7.1.5.
  to drainage system, 7.4.2., 7.4.3.4.
  to lead bend, 7.4.2.1.(3)
  to nominally horizontal soil or waste pipe, 7.4.2.1.(2)
  to a vent stack, 7.5.4.1.
  trap, 7.2.3.1.(3)
Cooling of hot waste, 7.4.4.2.
Copper pipe, 7.2.7.1.(1), 7.3.4.5.(2)
Copper tube, 7.2.7.4., 7.3.3.10., 7.3.4.5.(2)
Corrugated steel pipe and coupling, 7.2.6.8.
Couplings, mechanical pipe, 7.2.10.4.
CPVC, (see Chlorinated poly pipe)
Cross fittings, 7.2.4.1.(2)

D

Dead ends in piping, 7.4.6.1.(2)
Definitions, 1.4.1.2. of Div. A
Developed length
  definition, 1.4.1.2. of Div. A
  of fixture outlet pipes, 7.4.8.2.
Direct flush valves, 7.2.10.8.
Dissimilar materials, joints for, 7.3.3.6.
Downspouts, (see leaders)
Drains, (see building drains, fixture drains, roof drains)
Drainage equipment, 7.4.6.3.
Drainage joint, caulked lead, 7.3.2.1.
Drainage of water piping, 7.6.1.2.
Drainage piping, 7.2.6.1.
  arrangement of, 7.4.6.
  hydraulic loads on, 7.4.10.
  minimum slope and length of, 7.4.8.
  prohibit location of, 7.4.6.2., 7.7.3.1.
  sizing of, 7.4.9.
Drainage systems, 7.4.
  arrangement of piping, 7.4.6.
  cleanouts, 7.4.7.
  connections to, 7.4.2., 7.4.3.4.
  definition, 1.4.1.2. of Div. A
  hydraulic loads, 7.4.10.
  location of fixtures, 7.4.3.
  minimum slope and length of pipes, 7.4.8.

  sanitary, 7.4.4.1., 7.4.7.1.(1)
  separation, 7.3.5.7.
  size of pipes, 7.4.9.
  storm, 7.4.2.1.(1), 7.4.5.2., 7.4.7.1.(1)
  testing of, 7.3.6.
  traps, 7.2.3.1., 7.4.5.
  treatment of sewage and wastes, 7.4.4.
  walk-in coolers, 7.4.2.1.(1)(h)
Drilled and tapped joints, 7.3.3.1.
Drinking fountains, 7.4.2.1.(1)
Drinking fountain bubblers, 7.2.10.9.
Dual vents, 1.4.1.2. of Div. A, 7.5.8.2.
Ductile iron pipe, 7.2.6.4.

E

Eavestroughs (see gutters, or roofs)
Ejectors, 7.4.6.3.(7)
Electrical insulation at piping supports, 7.3.4.3.
Elevator pits drainage, 7.4.3.6., 7.4.4.3.
Expansion and contraction of piping systems, 7.3.3.9., 7.6.1.14., 7.6.1.16.

F

Ferrous pipe and fittings, 7.2.6.
Final tests, 7.3.6.1.(2), 7.3.6.1.(4), 7.3.6.2., 7.3.6.6.(1)
Fire Service mains, 7.2.11.
Fittings, 7.2.4. to 7.2.7.
  acid and corrosive, 7.2.8.1.
  brass or bronze, 7.2.7.2., 7.2.7.3.
  butt-fusion, 7.2.5.5.(3)
  cast iron, 7.2.6.5.
  concrete, 7.2.5.3.(3)
  CPVC hot and cold water pipe, 7.2.5.9.
  cross, 7.2.4.1.(2)
  ferrous, 7.2.6.
  flared joint, 7.2.7.7.
  installation of piping, 7.3.2.1.(4)
  lead, 7.2.7.8.(1)
  malleable iron, 7.2.6.6.
  marking of, 7.2.1.3.
  non-ferrous, 7.2.7.
  non-metallic, 7.2.5.
  plastic, 7.2.5.
  restrictions on use of, 7.2.4., 7.3.4.8.
  screwed, 7.2.6.5., 7.2.6.6.
  shower valves, 7.6.5.2.
  single or double sanitary, TY, 7.2.4.2.
  solder-joint, 7.2.7.5., 7.2.7.6.
  supply and waste, 7.2.10.6., 7.6.4.1.
  T, 7.2.4.1.
  vitrified clay, 7.2.5.4.
Fixtures, 7.2.2.
  connections of, 7.4.2.1., 7.4.2.3.
  construction of, 7.2.2.
  definition, 1.4.1.2. of Div. A
  hydraulic load from, Table 7.4.9.3., 7.4.10.
  indirectly connected, 7.3.3.11., 7.4.2.1.(1)
  installation of, 7.1.4.2., 7.1.6.1., 7.3.4.1., 7.4.3.2.
  location of, 7.1.7.1., 7.1.6.2., 7.4.3.
  specifications for, 7.2.2., 7.6.4.
  used, 7.2.1.2.
Fixture drains
  cleanouts for, 7.4.7.1.(10)
  connections of, to wet vents, 7.5.2.1.
  definition, 1.4.1.2. of Div. A
  fixture traps for, 7.5.7.1.(1)
  for floor outlet fixtures, 7.3.3.8.
  minimum slope of, 7.4.8.1.
  protection from backflow, 7.4.6.4.(3)
  size of, Tables 7.4.10.7., 7.4.10.8.
  venting of traps for, 7.5.1.1.
Fixture outlet pipes
  definition, 1.4.1.2. of Div. A
  developed length of, 7.4.8.2.
  for directly connected fixtures, 7.4.2.3.
  size of, 7.4.9.3.
Fixture units
  conversion, 7.4.10.5.
  definition, 1.4.1.2. of Div. A
Flanges
  floor, 7.2.10.1., 7.3.3.8.
  water closet, 7.2.10.2.(1)
Flared joints, 7.3.2.5.
Flared joint fittings, 7.2.7.7.
Flashing vent pipe, 7.2.10.14.
Floor drains
  connection of, to drainage systems, 7.1.4.2., 7.4.3.4.
  traps for, 7.5.1.1.(3)

Floor outlet fixtures, drain connections, 7.3.3.8.
Flow, peak demand, 7.6.3.1.
Flushing devices, 7.2.10.8., 7.6.1.11.
Food premises
  application, 3.7.6.1.
  employee facilities, 3.7.6.6.
  hot and cold water supply, 3.7.6.5.
  lavatories, appliances and sinks, 3.7.6.4.
  location of plumbing fixtures, 3.7.6.3.
  room finishes, 3.7.6.2.
  sleeping quarters, 3.7.6.7.
Freezing, protection from, 7.3.5.4.
Fresh air inlets, 1.4.1.2. of Div. A, 7.5.5.4.(1), 7.5.6.5.

G

Galvanized steel pipe, 7.2.6.7.
Garbage grinders, 7.4.3.3.
Grease interceptors (see Interceptors), 7.4.4.3.
Groove and shoulder mechanical pipe couplings, 7.2.10.4.

H

Hangers, pipe, 7.3.4.3., 7.3.4.5.(5)
Headers, 1.4.1.2. of Div. A, 7.5.8.3.
Horizontal offsets (see offsets in piping)
Horizontal piping, support of, 7.3.4.5.
Hub and spigot pipe, 7.3.2.1.(4)
Hydrant, frostproof, 7.6.1.9.
Hydraulic loads, determination of, 7.4.10.

I

Increaser fittings, 7.3.3.5.
Independence of support, 7.3.4.2.
Indirect connections, 7.3.3.11., 7.4.2.1.(1), 7.4.3.2.
Individual vents, 1.4.1.2. of Div. A, 7.5.8.2.
Inlets, fresh air, 7.5.5.4.
Installation of fixtures, 7.1.6.1., 7.3.4.2., 7.4.3.1., 7.6.1.7.
Insulation, electrical at piping supports, 7.3.4.3.
Interceptors
  capacity of, 7.4.4.3.(8)
  cleanouts for, 7.4.7.1.(8)
  definition, 1.4.1.2. of Div. A
  design of, 7.2.3.2.
  gasoline, 7.4.4.3.(2)
  grease, 7.4.4.3.(1)
  oil, 7.4.4.3.(2)
  restricted use of, 7.4.3.3.
  venting of, 7.5.5.2.
  where required, 7.4.4.3.

J

Jointing materials, 7.2.9.
Joints
  90° elbows, 7.2.4.3.
  drainage fittings solder, 7.2.7.5.
  pipe, 7.3.2., 7.3.3., 7.3.4.9.
  pressure application, 7.2.1.5.
  reduction limitation, 7.2.4.2.(2)
  water fittings solder, 7.2.7.6.

L

Lavatory overflow, 7.2.2.6.
Lead
  waste pipe and fittings, 7.2.7.8.
  solders and fluxes, 7.2.9.2.
Leaders (or downspouts)
  connections of, to roof drain, 7.3.3.7.
  definition, 1.4.1.2. of Div. A
  hydraulic load on, 7.4.10.10.
  sheet metal, 7.2.6.9.
  trap for, 7.4.5.2.(1)
Lighting of rooms, 7.1.6.1.(1)
Loads, hydraulic, 7.4.10.

M

Macerating Toilet System, 7.4.3.5., 7.4.9.2.(4), 7.5.7.7.(3)
Malleable iron water fittings screwed, 7.2.6.6.
Manholes, 7.4.7.1.(4), 7.4.7.2., 7.4.7.3.
Marking pipes and fittings, 7.2.1.3., 7.7.2.1.

- Materials and equipment
  - exposure of, 7.2.2.1.
  - fire service main, 7.2.11.
  - for fittings, 7.2.4. to 7.2.7.
  - for traps and interceptors, 7.2.3.
  - jointing, 7.2.9.
  - marking of, 7.2.1.3., 7.7.2.1.
  - miscellaneous, 7.2.10.
  - used, 7.2.1.2.
  - water service pipe, 7.2.11.
- Mechanical joints, 7.3.2.6.
  - pipe couplings for, 7.2.10.4.
- Mobile home
  - sewer service, 7.4.6.5.
  - water service pipe for, 7.6.1.15.
- Mortar, cement jointing, 7.2.9.1.
- Multi-storey venting, 7.5.2.

N

- Neutralizing and dilution tank, 7.4.4.4., 7.5.5.3.
- Nominally horizontal definition, 1.4.1.2. of Div. A
  - piping, 7.3.4.5.
- Noncombustible piping, 7.2.5.12.(5)
- Non-ferrous pipe and fittings, 7.2.7.
- Non-metallic pipe and fittings, 7.2.5.
- Non-potable water systems, 7.7.
  - connections to potable water systems, 7.6.2., 7.7.1.1.
  - identification of, 7.7.2.1.
  - location of pipes and outlets for, 7.7.3.1., 7.7.3.2.
  - permitted use, 7.1.5.3.(2)

O

- Offsets in piping, 1.4.1.2. of Div. A, 7.4.2.1.(2)
- Oil interceptors (see interceptors)
- Outlets for non-potable water system, 7.7.3.2.
- Overflows
  - rainwater tank, 7.4.2.2.
  - sink, 7.2.2.4., 7.2.2.6.

P

- Peak demand flow, 7.6.3.1.
- Pipe
  - ABS, 7.2.5.10., 7.2.5.12., 7.3.4.5.(2)
  - acid and corrosive, 7.2.8.1.
  - applications, summary of, 7.2.5., 7.2.7.
  - asbestos-cement, 7.2.5.1., 7.3.4.5.(2), 7.3.5.2.
  - brass, 7.2.7.1.(2), 7.2.7.2., 7.3.4.5.(2)
  - cast iron soil, 7.2.6.1., 7.2.6.2., 7.3.3.3., 7.3.4.5.(2)
  - cast iron water, 7.2.6.4., 7.3.4.5.(2)
  - chlorinated poly (vinyl chloride) (CPVC), 7.2.5.9., 7.3.4.5.
  - combustible, 7.2.5.12.(4)
  - concrete, 7.2.5.3.
  - copper, 7.2.7.1.(1), 7.3.4.5.(2)
  - ductile-iron water, 7.2.6.4.
  - flanges and fittings, brass or bronze, 7.2.7.2., 7.2.7.3.
  - hangers, 7.3.4.3., 7.3.4.5.(5)
  - hub and spigot, 7.3.2.1.(4)
  - joints and connections, 7.3.2., 7.3.3.
  - lead waste, 7.2.7.8., 7.3.4.5.(2)
  - marking of, 7.2.1.3., 7.7.2.1.
  - noncombustible, 7.2.5.12.(5)
  - open end, 7.4.6.1.(2)
  - plastic, 7.2.5.5. to 7.2.5.15., 7.3.4.5.(2), 7.6.1.10.
  - polyethylene water, 7.2.5.5., 7.2.5.6.
  - poly (vinyl chloride) (PVC), 7.2.5.8., 7.3.4.5.(2)
  - protection of, 7.3.5., 7.4.4.
  - sheet metal, 7.2.6.9.
  - size of, 7.4.9., 7.4.10.
  - steel, 7.2.6.7., 7.2.6.8., 7.3.3.3., 7.3.4.5.(2)
  - subsoil drainage, 7.4.5.3., 7.4.6.4.(8)
  - vitrified clay, 7.2.5.4., 7.3.5.2.
  - underground, 7.3.4.6., 7.3.5.1., 7.3.5.7.
  - water supply, 7.6., 7.7.
  - welded and seamless steel, 7.2.6.7.

Piping
  condensation, 7.3.5.6.
  construction and use of joints, 7.3.2.
  drainage of, 7.6.1.2.
  installation of, 7.3.3 9., 7.3.3.10., 7.3.5.3.
  joints and connections, 7.3.3.
  maximum pressure on, 7.2.1.5.
  mechanical damage, 7.3.5.5.
  nominally horizontal, 7.3.4.5., 7.3.4.6.
  protection of, 7.3.5., 7.4.4.
  service, 7.1.5.4.
  support of, 7.3.4.
  system, design pressure, 7.2.1.5.
  testing of, in drainage and venting systems, 7.3.6.
  testing of, potable water systems, 7.3.7.
Plastic pipe and fittings, 7.2.5.5. to 7.2.5.15.
Plumbing facilities, 7.1.4.1.
Polyethylene water pipe, 7.2.5.5.
Poly (vinyl chloride) (PVC) pipe and fittings, 7.2.5.8., 7.3.4.5.(2)
Potable water systems, 7.6.
  arrangement of piping for, 7.6.1.
  connections of, to potable and non-potable water systems, 7.1.5.3., 7.6.2.1., 7.7.1.1.
  protection of, from contamination, 7.6.2.
  size and capacity of pipes, 7.6.1., 7.6.3.
  tanks, 7.6.1.12.
  testing of, 7.3.7.
Potato peelers, 7.4.3.3.
Pressure reducing valves, 7.2.10.12., 7.6.3.3.
Pressure relief valves, 7.2.10.11., 7.6.1.12.
Private sewer
  definition, 1.4.1.2. of Div. A
  design requirement, 7.1.5.5.
Private sewage disposal systems
  definition, 1.4.1.2. of Div. A,
  requirement, 7.3.5.7., 7.4.4.1.
Private water supply system
  definition, 1.4.1.2. of Div. A,
  design, 7.1.5.5.
Protection of piping, 7.3.5., 7.4.4.

Q

Quarter bend fittings, 90°
  elbows, 7.2.4.3.

R

Reducer fittings, 7.3.3.5.
Relief valves
  discharge pipe for, 7.6.1.12.(5)
  specifications for, 7.2.10.11.
  where required, 7.6.1.12.
Relief vents
  connections to, 7.5.4.4., 7.5.7.3.
  definition, 1.4.1.2. of Div. A
  minimum size of, 7.5.7.4.
Risers
  definition, 1.4.1.2. of Div. A
  shut-off valves for, 7.6.1.4.
Roof drains
  connection to a leader, 7.3.3.7.
  definition, 1.4.1.2. of Div. A
Roof gutters, 1.4.1.2. of Div. A
Rubber gasket joints, 7.2.6.4.(4)

S

Saddle hubs or fittings, 7.2.10.5.
Sanitary building drains or sewers (see Building drains or Building sewers)
  definition, 1.4.1.2. of Div. A
Sanitary drainage system
  definition, 1.4.1.2. of Div. A, 7.4.4.1., 7.4.4.2.
Sanitary T fittings, 7.2.4.2.
Scope of Code (plumbing), 7.1.1.1.
Screwed cast iron water fittings, 7.2.6.5.
Screwed joints, 7.3.2.3.
Screwed malleable iron water fittings, 7.2.6.6.
Separation of drainage system, 7.3.5.7.
Separation of services, 7.1.5.4., 7.3.5.7.
Service piping, 7.1.5.4.
Service water heaters, 1.4.1.2. of Div. A, 7.6.1.12.

Sewage treatment and disposal systems, 7.4.4.
Sewers (see Building sewers)
Sheet metal leaders, 7.2.6.9.
Shower receptors, 7.2.2.3.(1)
Shower valves, 7.6.5.2.
Shut-off valves, 7.4.6.3.(6), 7.6.1.3. to 7.6.1.9.
Single storey venting, 7.5.2.
Sinks, dishwashing and food preparation, 7.2.2.4., 7.4.2.1., 7.4.4.3.
Size of
  cleanouts, 7.4.7.2.(1)
  drainage pipes, 7.4.9., 7.4.10.
  fixture outlet pipes, 7.4.9.3.
  interceptors, 7.4.4.3.
  vent pipes, 7.5.
  water distribution pipes, 7.6.3.1.
  water service pipes, 7.6.1.1.
Slip joints, 7.3.3.4.(2)
Slope of drainage pipes, 7.4.8.
Soil or waste pipes
  definition, 1.4.1.2. of Div. A
  location of, 7.4.6.2.
  size of, 7.4.9.1.
Soil or waste stacks
  cleanouts for, 7.4.7.1.(7)
  definition, 1.4.1.2. of Div. A
  hydraulic load, Table 7.4.10.6.
  size of, 7.4.9., 7.4.10.
  vent pipes for, 7.5.6.2.
Soil pipe, cast iron, 7.2.6.1., 7.3.3.3., 7.3.4.5.(2)
Solar domestic heating, 7.2.10.13., 7.6.1.13.
Solder, wiping, 7.2.9.2.
Soldered joint, 7.3.2.4.
Solder-joint fittings, 7.2.7.5., 7.2.7.6.
Solvent cement, Transition, 7.2.5.11.
S-trap standards, installation of, 7.3.3.8.
Stack, hydraulic load, Table 7.4.10.6.
Stack venting, 7.5.2.1.
Stack vents
  definition, 1.4.1.2. of Div. A
  requirement for, 7.5.4.1.
  size restriction, 7.5.7.2.
Steel pipe (welded and seamless), 7.2.6.7.
Stop-and-waste cocks, 7.6.1.9.
Storage type service water heaters, 1.4.1.2. of Div. A, 7.6.1.12.
Storm building drains or sewers (see Building drains or Building sewers)
  definition, 1.4.1.2. of Div. A
Storm drainage systems
  connection of, 7.4.2.1.(1)
  definition, 1.4.1.2. of Div. A
  hydraulic load, 7.4.10.9., 7.4.10.10.
  sumps for, 7.4.6.3.(8)
  traps for, 7.4.5.2.
Stubs, lead water closet, 7.3.3.8.(5)
Subsoil drainage pipes
  connection of, 7.4.5.3.
  definition, 1.4.1.2. of Div. A
Sud zone, 7.4.2.1.(4)
Sumps, 7.4.6.3.
Supply and waste fittings, 7.2.10.6.
Supports for piping, 7.3.4.

T

T fittings, 7.2.4.1., 7.2.4.2.
Tank
  dilution, 7.4.4.4., 7.5.5.2.(8), 7.5.5.3.
  neutralizing, 7.4.4.4., 7.5.5.3.
  sewage, 7.4.6.3.
  water, 7.6.1.12.
Temperature limit controls, 7.6.1.12.(2), 7.6.5.
Temperature relief valves
  specifications for, 7.2.10.11.
  where required, 7.6.1.12.(2)
Terminals, vent pipe, 7.5.6.5.
Testing of
  drainage and venting systems, 7.3.6.
  potable water system, 7.3.7.
Thermal expansion, 7.3.3.9., 7.6.1.16.
Threaded cast iron drainage fittings, 7.2.6.3.
Thrust block, 7.3.4.9.
Tracer wire, 7.2.11.3.
Transition solvent cement, 7.2.5.11.
Trap seals
  depth, 7.2.3.1.(1)
  maintaining, 7.4.5.5.
Trap standards
  definition, 1.4.1.2. of Div. A
  installation of, 7.3.3.8.

Traps
- bell, 7.2.3.1.(4)
- cleanouts for, 7.2.3.1., 7.4.5.4.
- definition, 1.4.1.2. of Div. A
- design of, 7.2.3.1., 7.4.5.1.(2)
- drum, 7.2.3.1.(5)
- for fixtures, 7.4.5.1., Table 7.4.9.3.
- for leaders, 7.4.5.2.(1)
- for storm drainage systems, 7.4.5.2.
- for subsoil drains, 7.4.5.3.
- location of, 7.4.5.4.
- restricted locations, 7.4.3.2.
- venting of, 7.5.1.

Treatment of sewage and wastes, 7.4.4.

Tube, copper, 7.2.7.4., 7.3.3.10.

U

Underground pipes
- protection of, 7.3.5.1., 7.3.5.2.
- support of, 7.3.4.6.

Unions and slip joints, 7.3.3.4.

Urinals
- certification, 7.6.4.2.
- installation of, 7.3.3.8., 7.4.3.1.

Used materials, 7.2.1.2.

V

Vacuum breakers (see Back-siphonage preventers)
- definition, 1.4.1.2. of Div. A,
- installation, 7.6.2.10.

Valves
- backwater, 7.4.6.4.
- check, 7.2.11.4., 7.4.6.3.(6), 7.6.1.10., 7.6.1.16., 7.6.2.4.
- direct flush, 7.2.10.8.
- pressure reducing, 7.2.10.12., 7.6.3.3.
- pressure relief, 7.2.10.11., 7.6.1.12.
- shut-off, 7.4.6.3.(6), 7.6.1.
- tank-type water closet, 7.2.10.10.(2), 7.6.2.4.(7)
- temperature relief, 7.2.10.11., 7.6.1.12.
- vacuum relief, 7.2.10.11.

Ventilation of rooms, 7.1.6.1.

Venting
- back, 7.5.6.1.(2)
- trap to vent, 7.5.6.3.
- not required, 7.5.1.1.(3), 7.5.1.1.(4)
- dual, 7.5.8.2.
- interceptors, 7.5.5.2., 7.5.6.5.(2)
- loop or circuit,
  - as a waste, 7.5.3.1.
  - combined relief, 7.5.3.1.(5)
  - connected above centre line, 7.5.6.2.(2)
  - connected to relief, 7.5.3.1.(4)
- offsets, 7.4.2.1.(2), 7.5.4.4., 7.5.7.4.
- sewage tanks, 7.5.5.1., 7.5.7.7.
- stacks,
  - outside a building, 7.5.6.5.(6)
  - required, 7.5.4.1., 7.5.4.2., 7.5.7.2.
  - terminals, 7.5.6.5.
- systems, testing of, 7.3.6.
- wet,
  - group, 7.5.2.1.(1)
  - more than one storey, 7.5.2.1.(1)(h), 7.5.2.1.(1)(i)
  - unlimited pipe length, 7.5.2.1.(1)(k)
  - water closets, 7.5.2.1.(1)
- yoke,
  - connection, 7.5.4.3.
  - diameter, 7.5.7.5.
  - eleven or more floors, 7.5.4.3.(1)

Vents
- branch, 7.5.8.3.
- circuit, 7.5.3.1., 7.5.8.3.
- combined relief, 7.5.3.1.(5)
- connected above centre line, 7.5.6.2.(2)
- connected above fixture, 7.5.6.4.
- connected back, 7.5.6.5.(1)
- continuous, 7.5.2.1.(1)(g)
- developed length, 7.5.8.3., 7.5.8.4.
- existing, use of, 7.5.6.5.(3)
- extended outside, 7.5.6.5.
- installed with waste, 7.5.6.1.(1)
- interceptors, 7.5.5.2.
- loading tables 7.5.
- location of, 7.5.6.3.
- manholes, 7.5.7.6.

- minimum outside, 7.5.6.5.(6)
- not required, 7.5.1.1.(3), (4)
- single family dwelling, 7.5.5.5.
- sizes for fixture traps, 7.5.7.1.
- stack, 7.5.4.2.
- terminals, 7.5.6.5.
- water closet, 7.5.6.3.(3)

Vent pipes
- definition, 1.4.1.2. of Div. A
- arrangement of, 7.5.6.
- fixture connections to, 7.4.2.1.
- flashing for, 7.2.10.14., 7.5.6.5.(8)
- for soil or waste stacks, 7.5.4., 7.5.7.2.
- location of, 7.5.6.2.
- minimum size of, 7.5.7.
- miscellaneous, 7.5.5.
- not required, 7.5.1.1.(3), (4)
- support of, above roof, 7.3.4.7., 7.5.6.5.(7)

Vent stacks
- definition, 1.4.1.2. of Div. A
- where required, 7.5.4.2.

Vertical piping, support of, 7.3.4.4.

Vitrified clay pipe and fittings, 7.2.5.4., 7.3.5.2.

W

Walk-in coolers, 7.4.2.1.(1)(h)

Waste pipe, lead, 7.2.7.8., 7.3.4.5.(2)

Waste, cooling of, 7.4.4.2.

Water closets
- certification, 7.6.4.2.
- installation of, 7.2.10.2., 7.3.3.8., 7.3.4.1.

Water efficiency, 7.6.4., 12.4.

Water hammer
- arresters, 7.2.10.15.
- prevention of, 7.6.1.14.

Water heaters, 7.6.1.12.

Water pipe
- size and capacity of, 7.6.1., 7.6.3.

Water service pipe
- for a mobile home, 7.6.1.15.
- separation, 7.3.5.7.
- sizing of, 7.6.3.4.
- materials, Table 7.2.11.2.

Water supply, for fixtures, 7.6.3.1.

Water systems (see potable water systems,
- non-potable water systems)

Water tests, 7.3.6., 7.3.7.

Water treatment device, 7.6.2.1.(2)

Welded and seamless steel pipe, 7.2.6.7.

Welded joints, 7.3.3.3.

Wet venting, 7.5.2.1.
- definition, 1.4.1.2. of Div. A

Wiped joint, 7.3.2.2.

Y

Yoke vent
- definition, 1.4.1.2. of Div. A
- minimum size of, 7.5.7.5.
- where required, 7.5.4.3.

Important Notice

These amendments are effective January 1, 2011.

These pages, which have shaded bars at the bottom, are to replace the existing corresponding pages on January 1, 2011.

BUILDING CODE ACT, S.O. 1992, c.23

as amended by:

S.O. 1997, c.24, s.224, except s.224(17), in force June 17, 1998
S.O. 1997, c.30, Schedule B, s.1-20 in force April 6, 1998
S.O. 1999, c.12, Schedule M, s.1-11 in force December 22, 1999
S.O. 2000, c.5, s.7 in force January 1, 2001
S.O. 2000, c.26, Schedule K, s.1 in force December 6, 2000
S.O. 2002, c.9, s.5, 6(1),(2), 16, 24, 25; 27, 31(1), 34, 40(1), 41(1), 43, 51(6),(9),(11)-(15), 53(3), 54, in force September 1, 2003
S.O. 2002, c.9, s.1-4, 6(3), 7-15, 17-19, 20(1),(2), 21-23, 26, 28-30, 31(2), 32, 33, 35-39, 40(2),(3), 41(2), 42, 44-50, 51(1),(2), (4),(5),(7),(8),(10), 52, 53(1),(2) in force July 1, 2005
S.O. 2002, c.17, Schedule C, s.1-6 in force July 1, 2005
S.O. 2002, c.17, Schedule F, Table in force January 1, 2003
S.O. 2005, c.33, s.1 in force December 15, 2005
S.O. 2006, c.19, Schedule O, ss.1, 2 in force June 22, 2006
S.O. 2006, c.32, Schedule C, s.3, in force January 1, 2007
S.O. 2006, c.21, Schedule F, s.104 in force July 25, 2007
S.O. 2006, c.22, s.112(8) in force July 3, 2007
S.O. 2006, c.35, Schedule C, s.8 in force August 20, 2007
S.O. 2009, c.12, Schedule J, ss.1, 2 in force May 14, 2009
S.O. 2009, c.33, Schedule 21, s.2(1) in force December 15, 2009
S.O. 2009, c.33, Schedule 21, ss.2(4),(7),(8),(9) in force July 1, 2010
S.O. 2009, c.33, Schedule 21, ss.2(2),(3),(5),(6) in force January 1, 2011

CONTENTS

Interpretation

1. Definitions
1.1 Roles of Various Persons

Enforcement Authorities

2. Administration
3. Enforcement by Municipalities
3.1 Enforcement, Boards of Health
4. Provincial Enforcement
4.1 Enforcement by Registered Code Agency Appointed by a Principal Authority
4.2 Enforcement by Registered Code Agency Appointed by an Applicant
5. Agreements re Enforcement
6. Agreement re Review of Plans
6.1 Agreement re Plumbing

6.2 Agreement re Sewage Systems
7. By-laws, Resolutions, Regulations
7.1 Code of Conduct

Construction and Demolition
8. Building Permits
9. Reserved
10. Change of Use
10.1 Prohibition re Sewage Systems

10.2 Notice of Readiness for Inspection
11. Occupancy or Use after Completion
12. Inspection of Building Site
13. Order Not to Cover
14. Stop Work Order

Property Standards
15. Reserved
15.1 Municipal Property Standards
15.2 Inspection of Property Without Warrant
15.3 Appeal of Order
15.4 Power of Municipality if Order not Complied with
15.5 Certificate of Compliance
15.6 Property Standards Committee
15.7 Emergency Order re Dangerous Non-Conformity with Standards
15.8 Inspection Powers of Officer

Unsafe Buildings
15.9 Inspection of Unsafe Buildings
15.10 Emergency Order where Immediate Danger

Maintenance Inspection Programs
15.10.1 Maintenance Inspections

Qualifications
15.11 Qualifications for Various Positions
15.12 Qualifications re Sewage Systems
15.13 Duty to have Insurance

Powers and Duties of Registered Code Agencies
15.14 Notice to Chief Building Official
15.15 Functions of Registered Code Agencies
15.16 Scope of Agency's Powers
15.17 Persons Acting on Behalf of an Agency

(2) Issuance of Permits. The chief building official shall issue a permit referred to in subsection (1) unless,

(a) the proposed building, construction or demolition will contravene this Act, the building code or any other applicable law;

(b) the applicant is a builder or vendor as defined in the *Ontario New Home Warranties Plan Act* and is not registered under that Act;

(c) a person who prepared drawings, plans, specifications or other documents or gave an opinion concerning the compliance of the proposed building or construction with the building code does not have the applicable qualifications, if any, set out in the building code or does not have the insurance, if any, required by the building code;

(d) the plans review certificate, if any, required for the application does not contain the prescribed information;

(e) the application for the permit is not complete; or

(f) any fees due have not been paid. 2002, c.9, s.14(2)

(2.1) Restriction. If the application includes a plans review certificate that contains the prescribed information, the chief building official is not entitled to refuse to issue the permit on the grounds that the proposed construction of the building to which the certificate relates does not comply with the building code. 2002, c.9, s.14(2)

(2.2) Decision. If an application for a permit meets the requirements prescribed by regulation, the chief building official shall, unless the circumstances prescribed by regulation apply, decide within the period prescribed by regulation whether to issue the permit or to refuse to issue it. 2002, c.9, s.14(2); 2009, c.33, Sched. 21, s.2(2)

(2.3) Same, Reasons for Refusal. If the chief building official refuses to issue the permit, he or she shall inform the applicant of all of the reasons for the refusal of the permit and shall do so within the period prescribed by regulation. 2002, c.9, s.14(2)

(3) Conditional Permit. Even though all requirements have not been met to obtain a permit under subsection (2), the chief building official may issue a conditional permit for any stage of construction if,

(a) compliance with by-laws passed under sections 34 and 38 of the *Planning Act* and with such other applicable law as may be set out in the building code has been achieved in respect of the proposed building or construction;

(b) the chief building official is of the opinion that unreasonable delays in the construction would occur if a conditional permit is not granted; and

(c) the applicant and such other person as the chief building official determines agree in writing with the municipality, upper-tier municipality, board of health, planning board, conservation authority or the Crown in right of Ontario to,

  (i) assume all risk in commencing the construction,

  (ii) obtain all necessary approvals in the time set out in the agreement or, if none, as soon as practicable,

  (iii) file plans and specifications of the complete building in the time set out in the agreement,

  (iv) at the applicant's own expense, remove the building and restore the site in the manner specified in the agreement if approvals are not obtained or plans filed in the time set out in the agreement, and

  (v) comply with such other conditions as the chief building official considers necessary, including the provision of security for compliance with subclause (iv). 1992, c.23, s.8(3); 1997, c.30, Sched. B, s.7(2); 1999, c.12, Sched. M, s.5(1); 2002, c.17, Sched. F, Table

(3.1) Delegation re Conditional Permits. A principal authority may, in writing, delegate to the chief building official the power to enter into agreements described in clause (3)(c) and may impose conditions or restrictions with respect to the delegation. 2002, c.9, s.14(3)

(4) Criteria. In considering whether a conditional permit should be granted, the chief building official shall, among other matters, have regard to the potential difficulty in restoring the site to its original state and use if required approvals are not obtained. 1992, c.23, s.8(4)

(5) Registration. Any agreement entered into under clause (3)(c) may be registered against the land to which it applies and the municipality, upper-tier municipality, board of health, planning board, conservation authority or the Province of Ontario, as the case may be, is entitled to enforce its provisions against the owner and, subject to the *Registry Act* and the *Land Titles Act*, any and all subsequent owners of the land. 1999, c.12, Sched. M, s.5(2); 2002, c.17, Sched. F, Table

(6) Enforcement of Agreement. If the chief building official determines that a building has not been removed or a site restored as required by an agreement under clause (3)(c), the chief building official may cause the building to be removed and the site restored and for this purpose the chief building official, an inspector and their agents may enter upon the land and into the building governed by the agreement at any reasonable time without a warrant. 1992, c.23, s.8(6)

(7) Lien. If the building is in a municipality, the municipality shall have a lien on the land for the amount spent on the removal of the building and restoration of the site under subsection (6) and the amount shall have priority lien status as described in section 1 of the *Municipal Act, 2001* or section 3 of the *City of Toronto Act, 2006*, as the case may be. 2002, c.17, Sched. F, Table; 2006, c.32, Sched. C, s.3(1)

(8) Deemed Taxes. If the building is in territory without municipal organization, the amount spent on the removal of the building and restoration of the site under subsection (6) shall be deemed to be taxes imposed under section 3 of the *Provincial Land Tax Act* for the purposes of sections 26 and 27 of that Act. 1992, c.23, s.8(8)

(8.1) Disclosure of Prescribed Information. The chief building official shall, within the period and in the manner prescribed by regulation, give to the corporation designated under section 2 of the *Ontario New Home Warranties Plan Act* the information prescribed by regulation relating to permits issued under this section and the applications for those permits. 2009, c.33, Sched. 21, s.2(3)

(9) Referral of Plans, etc. Upon reasonable grounds, the chief building official or registered code agency may refer drawings, plans or specifications accompanying applications for permits or the reports arising out of the general review of the construction of a building to the Association of Professional Engineers of Ontario or the Ontario Association of Architects for the purpose of determining if the *Professional Engineers Act* or the *Architects Act* is being contravened. 2002, c.9, s.14(4)

(9.1) Same. At the request of the Association of Professional Engineers of Ontario or the Ontario Association of Architects, the chief building official shall refer documents and information described in subsection (9) to those associations for the purpose of determining if the *Professional Engineers Act* or the *Architects Act* is being contravened. 2002, c.9, s.14(4)

(10) Revocation of Permits. Subject to section 25, the chief building official may revoke a permit issued under this Act,

(a) if it was issued on mistaken, false or incorrect information;
(b) if, after six months after its issuance, the construction or demolition in respect of which it was issued has not, in the opinion of the chief building official, been seriously commenced;
(c) if the construction or demolition of the building is, in the opinion of the chief building official, substantially suspended or discontinued for a period of more than one year;
(d) if it was issued in error;
(e) if the holder requests in writing that it be revoked; or
(f) if a term of the agreement under clause (3)(c) has not been complied with. 1992, c.23, s.8(10)

(11) Prohibition. No person shall construct or demolish a building or cause a building to be constructed or demolished except in accordance with this Act and the building code. 1992, c.23, s.8(11)

(12) Notice of Change. No person shall make a material change or cause a material change to be made to a plan, specification, document or other information on the basis of which a permit was issued without notifying, filing details with and obtaining the authorization of the chief building official. 1992, c.23, s.8(12)

(13) Prohibition. No person shall construct or demolish a building or cause a building to be constructed or demolished except in accordance with the plans, specifications, documents and any other information on the basis of which a permit was issued or any changes to them authorized by the chief building official. 1992, c.23, s.8(13)

(14) Restriction. If a request for authorization referred to in subsection (12) or (13) is accompanied by a change certificate that contains the prescribed information, the chief building official is not entitled to refuse to authorize the change on the grounds that the construction of the building to which the certificate relates does not comply with the building code. 2002, c.9, s.14(5)

9. Repealed. 2009, c.33, Sched. 21, s.2(4)

10. (1) Change of Use. Even though no construction is proposed, no person shall change the use of a building or part of a building or permit the use to be changed if the change would result in an increase in hazard, as determined in accordance with the building code, unless a permit has been issued by the chief building official. 2002, c.9, s.16

2.3 prescribing the period within which the public meeting referred to in subsection 7(6) must be held;

2.4 prescribing the records to be maintained by a principal authority and the period for which the records must be retained;

3. governing the manner of construction and types and quality of materials used therein;

3.1 establishing objectives governing the standards for the construction and demolition of buildings;

3.2 prescribing the persons who may apply for a permit under section 8 and the information to be provided with an application for a permit under section 8;

3.3 prescribing the information that a plans review certificate must contain for the purposes of clause 8(2)(d);

3.4 prescribing requirements and circumstances for the purposes of subsection 8(2.2) and prescribing the period within which the chief building official is required to make a decision under subsection 8(2.2) and the manner of determining when the period begins;

3.4.1 prescribing the period within which the chief building official is required to inform an applicant under subsection 8(2.3) and the manner of determining when the period begins;

3.5 prescribing the information that a plans review certificate must contain under subsection 8(2.1) and a change certificate must contain under subsection 8(14);

4. setting out the applicable laws with which compliance must be achieved before a conditional permit may be issued under subsection 8(3);

4.1 prescribing the information that a chief building official is required to give under subsection 8(8.1) and prescribing the period within which and the manner in which the chief building official shall give the information;

5. governing the design of buildings and the use to which they may be put;

6. Repealed.

7. setting out rules and policies to be observed in the interpretation of the building code by any person exercising a power or discretion conferred under the Act or the building code;

8. determining an increase in hazard for the purposes of section 10;

9. adopting by reference, in whole or in part, with such changes as the Lieutenant Governor in Council considers necessary, any code, formula, standard, guideline, protocol or procedure and requiring compliance with any code, formula, standard, guideline, protocol or procedure that is so adopted.

10. requiring any part of the design, construction or demolition of a building to be under the general review of an architect as defined in the *Architects Act* or a professional engineer as defined in the *Professional Engineers Act* and that copies of reports arising from the general review be provided to the chief building official or a registered code agency;
11. designating organizations to test prefabricated building units to the standards prescribed by the building code and providing for the placing of their label on units that conform to the standards;
12. requiring the approval of an inspector or a registered code agency in respect of any method, matter or thing;
13. requiring the posting on buildings or sites of construction or demolition of such documents or information as is prescribed;
14. requiring such documents, information, records, drawings or specifications as are prescribed to be kept on the site of construction or demolition;

14.1 prescribing the records to be kept by any person and the returns of information and reports to be made by any person and providing for the inspection and examination of the records.

15. requiring notice to be given to the chief building official, an inspector or a registered code agency respecting any matter in the course of construction, including notice of readiness for inspection at the stages of construction of a building, and specifying the person required to give the notices;

15.1 prescribing the type and manner of inspections for the purposes of subsection 10.2(2) (readiness for inspection) and prescribing the period within which the inspections must be carried out;

15.2 prescribing the information that must be given to the chief building official about a person who is required by subsection 15.12(3) to have certain qualifications or to meet certain requirements or both;

15.3 prescribing the information that must be given to the chief building official under subsection 15.13(5) about any person required to have insurance coverage and about the coverage;

15.4 prescribing the manner in which a referral to the chief building official under subsection 14(5) must be made;

16. requiring notice to be given to the chief building official respecting the change in prescribed classes of use made of a building;
17. requiring the chief building official to transmit to the director such returns or reports as are prescribed;
18. prescribing conditions under which a building or any part of a building may be occupied, including requiring notice to be given to a chief building official or registered code agency and requiring permission to be received from the official or agency before the building or part may be occupied;

19. exempting any building or person or class thereof from compliance with all or any part of this Act and the regulations and prescribing conditions for the exemption;
20. prescribing the form of a warrant and the form in which the information upon oath will be taken under section 21;
21. requiring the alteration of any part of an existing building where construction in relation to the building affects that part;
22. requiring the payment of fees in respect of applications to the Building Materials Evaluation Commission and prescribing the amounts thereof;

22.1 prescribing the manner in which the Minister's written interpretations under section 28.1 are to be made available to the public;

23. designating materials evaluation bodies for the purposes of section 29;
24. establishing criteria to be followed by the Minister in respect of a ruling under section 29;
25. prescribing procedures of the Building Code Commission and the Building Materials Evaluation Commission;
26. prescribing the persons to whom notice shall be given of the issuance of a permit, the time for giving the notice and the class of buildings for which notice is required;
27. defining, for the purposes of this Act and the building code, any word or expression not defined in this Act, and in so doing may define a word or expression differently for different provisions;
28. prescribing forms and providing for their use or requiring that forms provided by the Minister or the director be used, and prescribing the information that must be contained in the forms;
29. prescribing boards of health, planning boards and conservation authorities that are responsible for the enforcement of the provisions of this Act related to sewage systems and the municipalities and territory without municipal organization in which they will have jurisdiction to carry out the enforcement;
30. permitting chief building officials or registered code agencies, subject to such conditions as are set out in the building code, to allow the use of materials, systems and building designs other than those prescribed in the building code with respect to the construction of buildings;
31. governing the location of sewage systems;
32. designating areas in which any class of sewage system may not be established;
33. prescribing qualifications for chief building officials, inspectors, registered code agencies, designers and other persons referred to in section 15.12 and related matters including,
    i. requiring different qualifications for different classes of officials, inspectors, agencies, designers and other persons,

  ii. requiring assessments or examinations in connection with obtaining or maintaining the required qualifications,
  iii. establishing one or more registers identifying persons with qualifications and such other information as the regulation may require, and
  iv. requiring fees to be paid in connection with the qualifications;

34. establishing certification, registration or licensing schemes for chief building officials, inspectors, registered code agencies, designers and other persons referred to in sections 15.11 (qualifications) and 15.12 (qualifications re sewage systems) which may include provision for,
  i. the eligibility or ineligibility of classes of persons to obtain certification, registration or a licence,
  ii. categories or classes of certification, registration or licence,
  iii. application for the issuance, amendment or renewal of a certificate, registration or a licence,
  iv. the issuance, amendment or renewal of a certificate, registration or a licence or the refusal to do so,
  v. suspension, revocation or cancellation of a certificate, registration or a licence,
  vi. the imposition of conditions relating to a certificate, registration or licence, including conditions relating to the qualifications of directors, officers, partners, employees and others associated with the holder of the certificate, registration or licence, conditions relating to the manner in which specified persons carry out activities under this Act and the building code and conditions relating to insurance coverage, including the kinds and amounts of insurance and the circumstances in which a person will be considered to be covered by insurance,
  vii. the establishment and maintenance of one or more registers containing information about the holders of certificates, registrations or licences and containing such information as may be given to the director under paragraph 35.1, and
  viii. fees payable in connection with certification, registration or licensing;

35. prescribing an appeal to a prescribed tribunal from a refusal to issue or renew a certificate, registration or licence or a suspension, revocation or cancellation of a certificate, registration or licence, prescribing the circumstances in which the decision appealed from takes effect immediately despite the appeal, and prescribing the circumstances in which the tribunal may stay the decision pending the outcome of the appeal;

35.1 requiring the Ontario Association of Architects and the Association of Professional Engineers of Ontario to give the prescribed information to the director;

35.2 prescribing fees payable to the Crown by the Ontario Association of Architects and the Association of Professional Engineers of Ontario in connection with the registers referred to in paragraphs 33 and 34 and in respect of the development of training materials for a purpose described in paragraph 33 or 34;

35.3 prescribing the persons who are required under subsection 15.13(1) to have insurance coverage and prescribing the kinds and amounts of insurance that are required and the circumstances in which the person will be considered to be covered by insurance;

35.4 prescribing additional functions that registered code agencies may perform;

35.5 prescribing the manner in which registered code agencies and persons authorized by them under subsection 15.17(1) are required to perform any of their functions;

35.6 prescribing the manner in which a registered code agency is authorized to collect, use and disclose information;

35.7 prescribing circumstances in which a registered code agency may be appointed in respect of a building even though an inspector or another registered code agency has already carried out a function described in section 15.15;

35.8 prescribing circumstances in which a registered code agency cannot be appointed, including circumstances that would constitute a conflict of interest for a registered code agency;

35.9 prescribing the information that a registered code agency is required to give to the director or to the chief building official;

35.10 prescribing the classes of persons that may be authorized by a registered code agency under subsection 15.17(1), the conditions to which the authorization may be subject and the information that must be included in a certificate of authorization;

35.11 prescribing certificates and the form of certificates referred to in subsection 15.18 (2), the information that the certificates are required to contain and the circumstances and manner in which registered code agencies are permitted to issue them;

35.12 prescribing the circumstances in which the appointment of a registered code agency may be terminated and the conditions that must be met before the termination of an appointment, including,

  i. requiring the consent of the director and authorizing the director to impose conditions and restrictions in connection with the consent, and

  ii. authorizing an appeal to a person specified in the regulations from a decision of the director or conditions imposed by the director;

36. designating persons, specifying powers of a chief building official or inspector that those designated persons may exercise to enforce this Act and the building code in relation to the qualifications of persons described in sections 15.11 and 15.12 and the requirement in section 15.13 for insurance coverage, and establishing conditions for the exercise of the specified powers;
37. prescribing transitional matters necessary for the regulation of sewage systems, including matters relating to,
    - i. licensing and certification and the qualification of inspectors and persons described in subsection 15.12(1);
    - ii. certificat of approval and orders issued under the *Environmental Protection Act*,
    - iii. enforcement issues,
    - iv. matters commenced under the *Environmental Protection Act*, including appeals,
    - v. records and documents to be kept or transferred and the payment of associated costs,
    - vi. certification of records and their use in courts,
    - vii. the continuation of matters commenced under the *Environmental Protection Act*, and
    - viii. the transfer of responsibilities involving any municipality or any board of health, conservation authority or planning board prescribed under section 3.1.
38. permitting the Building Code Commission to sit in one or more divisions simultaneously upon such conditions as may be prescribed in the regulation;
39. authorizing one member of the Building Code Commission, with the approval of the chair or vice-chair, to hear and determine any matter and deeming the member to constitute the commission for that purpose, under such conditions as may be prescribed in the regulation;

39.1 prescribing relationships for the purposes of clause 23(3)(d) (eligibility to be a member of the Commission);

39.2 prescribing the period within which the Building Code Commission must hold a hearing in respect of a dispute described in clause 24(1)(b) or (c);

39.3 providing for transitional provisions relating to the effect of a repeal or re-enactment of any provision of this Act;

40. prescribing any matter referred to in this Act as prescribed. 1992, c.23, s.34(1); 1997, c.30, Sched. B, s.17(1-4); 1999, c.12, Sched. M, s.11; 2002, c.9, s.51(1, 2, 4-14); 2006, c.19, Sched. O, s.1(12-17); 2006, c.35, Sched. C, s.8(3); 2009 c.33, Sched. 21, s.2(5),(6),(7)

Storm sewer means a sewer that conveys *storm sewage*.

Subsoil drainage pipe means a pipe that is installed underground to intercept and convey subsurface water, and includes foundation drain pipes.

Suite means a single room or series of rooms of complementary use, operated under a single tenancy, and includes,

(a) *dwelling units*,

e_1 (b) individual guest rooms in motels, hotels, boarding houses, rooming houses and dormitories, and

(c) individual stores and individual or complementary rooms for *business and personal services occupancies*.

r_6 *Tarion Warranty Corporation* means Tarion Warranty Corporation as designated under section 2 of the *Ontario New Home Warranties Plan Act*.

Theatre means a place of public assembly intended for the production and viewing of the performing arts or the screening and viewing of motion pictures, and consisting of an auditorium with permanently fixed seats intended solely for a viewing audience.

Trap means a fitting or device that is designed to hold a liquid seal that will prevent the passage of gas but will not materially affect the flow of a liquid.

Trap arm means that portion of a *fixture drain* between the *trap weir* and the *vent pipe* fitting.

Trap dip means the lowest part of the upper interior surface of a *trap*.

Trap seal depth means the vertical distance between the *trap dip* and the *trap weir*.

Trap standard means the *trap* for a *fixture* that is integral with the support for the *fixture*.

Trap weir means the highest part of the lower interior surface of a *trap*.

Tribunal means the License Appeal Tribunal established under the *Licence Appeal Tribunal Act, 1999*.

Vacuum breaker means *back-siphonage preventer*.

Vent pipe means a pipe that is part of a *venting system*.

Vent stack means a *vent pipe* that is connected at its upper end to a *header* or is terminated in *open air* and that is used to limit pressure differential in a *soil* or *waste stack*.

Venting system means an assembly of pipes and fittings that connects a *drainage system* with *open air* for circulation of air and the protection of *trap* seals in the *drainage system*.

Vertical leg means the vertical portion of a *fixture* drain and includes the portion of a drain from the outlet of a water closet bowl to the point where the connecting piping changes to horizontal.

Waste pipe means a *sanitary drainage pipe* that carries the discharge from a *fixture* directly to a *waste stack*, *soil stack*, *sanitary building drain*, *branch* or *sewage* system.

Waste stack means a vertical *waste pipe* that passes through one or more *storeys* and includes any offset that is part of the stack that conducts liquid waste from *fixtures* other than *sanitary units*.

Water distribution system means an assembly of pipes, fittings, valves and appurtenances that conveys *potable water* to water supply outlets, *fixtures*, *plumbing appliances* and devices from the *water service pipe* or from a *point of entry treatment unit* located in the *building*.

Water purveyor means the owner or operator of a *drinking-water system*.

Water service pipe means a pipe on the property that conveys *potable* water from a *drinking-water system* or a *private water supply* to the inside of the *building*.

Water system means a *water service pipe*, a *private water supply*, a *water distribution system*, a *fire service main* or any part of any of them.

Wet vent means a *waste pipe* that also serves as a *vent pipe*.

Yoke vent means a *vent pipe* that is connected at its lower end to a *soil* or *waste stack* and at its upper end to a *vent stack* or a *branch vent* that is connected to a *vent stack*.

7.6.3.2. Hydraulic Load

(1) Except as provided in Sentence (3), the hydraulic load of a *fixture* or device that is listed in Table 7.6.3.1. shall be the number of *fixture units* given in the Table.

(2) Except as provided in Sentences (1) and (3), the hydraulic load of a *fixture* that is not listed in Table 7.6.3.1. is the number of *fixture units* listed in Table 7.6.3.2.

(3) Where *fixtures* are supplied with both hot and cold water, the hydraulic loads for maximum separate demands shall be 75% of the hydraulic load of the *fixture units* given in Tables 7.6.3.1. and 7.6.3.2. when using a detailed engineering design method.

Table 7.6.3.2.
Hydraulic Loads of Fixtures Not Listed in Table 7.6.3.1.
Forming Part of Sentences 7.6.3.2.(2) and (3)

Size of Supply Pipe, in.	Hydraulic Load, *fixture units*	
	Private Use	*Public Use*
3/8	1	2
	2	4
	3	6
1	6	10
Column 1	2	3

7.6.3.3. Static Pressure

(1) Where the static pressure at any *fixture* may exceed 550 kPa, a pressure reducing valve conforming to Article 7.2.10.12. shall be installed to limit the maximum static pressure at the *fixture* to 550 kPa.

7.6.3.4. Size

(1) Every *water service pipe* shall be sized according to the peak demand flow but shall not be less than ¾ in. *size*.

7.6.4. Water Efficiency

7.6.4.1. Water Supply Fittings

(1) The flow rates of fittings that supply water to a *fixture* shall not exceed the maximum flow rates at the test pressures listed for that fitting in Table 7.6.4.1.

(2) Sentence (1) does not apply to a *fixture* located in a *heritage building*.

Table 7.6.4.1.
Maximum Flow Rates for Water Supply Fittings
Forming Part of Sentence 7.6.4.1.(1)

Fitting	Maximum Flow, L/min	Test Pressure, kPa
Lavatory Faucet	8.35	413
Kitchen Faucet	8.35	413
Shower Heads	9.5	550
Column 1	2	3

7.6.4.2. Plumbing Fixtures

(1) Water closets and urinals shall be certified to CAN/CSA-B45.0, "General Requirements for Plumbing Fixtures".

r_6 **(2)** The flush cycle for each *fixture* that is a water closet or urinal shall not exceed the maximum flush cycle listed for that *fixture* in Table 7.6.4.2.

r_6 **(3)** Sentence (2) does not apply to a *fixture* located in an existing *building* where the *chief building official* is satisfied that compliance with the requirement is impracticable because of maintenance or operational difficulties. (See Appendix A.)

Table 7.6.4.2.
Maximum Flush Cycles for Sanitary Fixtures
Forming Part of Sentences 7.6.4.2.(2)

Fixture	litres
Water Closet (Tank Type)	6
Water Closet (Direct Flush)	6
Urinal (Tank Type)	3.8[1]
Urinal (Direct Flush)	3.8[1]
Column 1	2

Notes to Table 7.6.4.2.:

(1) Urinals equipped with automatic flushing devices shall be controlled to prevent unnecessary flush cycles during *building* down time.

7.6.5. Water Temperature Control

7.6.5.1. Maximum Temperature of Hot Water

(1) Except as provided in Sentences (2) and 7.6.5.3.(1), the maximum temperature of hot water supplied by fittings to *fixtures* in a *residential occupancy* shall not exceed 49°C.

(2) Sentence (1) does not apply to hot water supplied to installed dishwashers or clothes washers.

7.6.5.2. Showers

r_4 **(1)** Except as provided for in Sentence (2) and (3), all valves supplying fixed location shower heads, shall be individually pressure-balanced or thermostatic-mixing valves, conforming to ASME A112.18.1 / CAN/CSA-B125.1, "Plumbing Supply Fittings".

r_4 **(2)** An individually pressure-balanced or thermostatic-mixing valve shall not be required for showers if a single temperature water supply for such showers is controlled by a master thermostatic-mixing valve conforming to CAN/CSA-B125.3, "Plumbing Fittings".

(3) Deck-mounted, hand-held, flexible-hose spray attachments are exempt from the thermal shock requirements of Sentence (1).

(4) Pressure-balanced or thermostatic-mixing valves shall be,
(a) designed so that the outlet temperature does not exceed 49°C, or
(b) equipped with high-limit stops which shall be adjusted to a maximum hot water setting of 49°C.

7.6.5.3. Temperature Control Devices

(1) A *water distribution system* supplying hot water to any bathtub, shower or hand basin that is accessible to a patient or resident in a Group B, Division 2 or 3 occupancy or a resident of a group home, *home for special care* or residence for developmentally-handicapped adults shall have one or more temperature gauges and control devices that are,
(a) accessible only to supervisory staff, and
(b) capable of being adjusted to ensure that the temperature of the water supplied to the *fixtures* does not exceed 49°C.

Section 7.7. Non-Potable Water Systems

7.7.1. Connection

7.7.1.1. Non-Potable Connection

(1) A non-*potable water system* shall not be connected to a *potable water system*.

Division C

Administrative Provisions

Part 1

General

Section 1.1. Administration

1.1.1. Administration 3

Section 1.2. Design and General Review

1.2.1. Design 3

1.2.2. General Review 7

Section 1.3. Permits and Inspections

1.3.1. Permits 8

1.3.2. Site Documents 16a

1.3.3. Occupancy of Unfinished Building 16a

1.3.4. Fire Department Inspection 18

1.3.5. Notices and Inspections 19

1.3.6. As Constructed Plans 22

Section 1.4. Search Warrant

1.4.1. Forms 22

Section 1.5. Designated Persons and Powers

1.5.1. General 25

Section 1.6. Prescribed Person

1.6.1. General 25

Section 1.9. Fees

1.9.1. Fees 26

(3) Where a permit is required for the *demolition* of a *building* in Sentence 1.2.2.3.(1), descriptions of the structural design characteristics of the *building* and the method of *demolition* shall be included in the application for a permit to demolish the *building*.

(4) No person shall commence *demolition* of a *building* or any part of a *building* before the *building* has been vacated by the occupants except where the safety of the occupants is not affected.

(5) A tent or group of tents is exempt from the requirement to obtain a permit under section 8 of the Act and is exempt from compliance with the Code provided that the tent or group of tents are:
(a) not more than 60 m^2 in aggregate ground area,
(b) not attached to a *building*, and
(c) constructed more than 3 m from other structures.

1.3.1.2. Applications for Permits under Section 8 of the Act

(1) An application for a permit under section 8 of the Act to *construct* or *demolish* a *building* shall be made by
(a) the owner of the property on which the proposed *construction* or *demolition* is to take place, or
(b) the authorized agent of the owner referred to in Clause (a).

(2) An application referred to in Sentence (1) that is made after June 30, 2005 shall be in a form approved by the *Minister*.

(3) In Sentence (1),

owner includes, in respect of the property on which the *construction* or *demolition* will take place, the registered owner, a lessee and a mortgagee in possession.

1.3.1.3. Period Within Which a Permit is Issued or Refused

r_6 **(1)** Subject to Sentences (2) and (3) and unless the circumstances set out in Sentence (6) exist, if an application for a permit under subsection 8(1) of the Act that meets the requirements of Sentence (5) is submitted to a *chief building official* on or after the day subsection 2(2) of Schedule 21 to the *Good Government Act, 2009* comes into force, the *chief building official* shall, within the time period set out in Column 3 of Table 1.3.1.3. corresponding to the class of *building* described in Column 2 of Table 1.3.1.3. for which the application is made,

(a) issue the permit, or
(b) refuse to issue the permit and provide in writing all of the reasons for the refusal.

(2) If an application for a permit under subsection 8(1) of the Act proposes *construction* or *demolition* of two or more *buildings* of different classes described in Column 2 of Table 1.3.1.3. that have different time periods in Column 3 of Table 1.3.1.3., the longer of the time periods shall be the time period for the purposes of Sentence (1).

(3) If an application for a permit under subsection 8(1) of the Act proposes *construction* or *demolition* of a *building* described in Sentence (4), the time period for the purposes of Sentence (1) shall be the longer of
(a) 10 days, and
(b) the time period corresponding to the class of the *building* described in Column 2 of Table 1.3.1.3. that the *building* in Sentence (4) serves, if any.

(4) A *building* referred to in Sentence (3) is:
(a) a structure occupying an area of 10 m^2 or less that contains *plumbing*, including the *plumbing* appurtenant to it,
(b) *plumbing* not located in a structure,
(c) a *sewage system*, or
(d) a structure designated in Article 1.3.1.1. of Division A.

r_6 **(5)** The requirements that an application for a permit under subsection 8(1) of the Act must meet for the purposes of Sentence (1) are,
(a) that the application is made in the form described in Sentence 1.3.1.2.(2),
(b) that the applicant for the permit is a person described in Clause 1.3.1.2.(1)(a) or (b),
(c) that all applicable fields on the application form and required schedules are completed,
(d) that all required schedules are submitted with the application,
(e) that payment is made of all fees that are required, under the applicable by-law, resolution or regulation made under clause 7(1)(c) of the Act, to be paid when the application is made, and
(f) that the applicant has declared in writing that,
    (i) the application meets all the requirements set out in Clauses (a) to (e),
    (ii) the application is accompanied by the plans and specifications prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the Act,

(iii) the application is accompanied by the information and documents prescribed by the applicable by-law, resolution or regulation made under clause 7(1)(b) of the Act which enable the *chief building official* to determine whether the proposed *building*, *construction* or *demolition* will contravene any *applicable law*, and

(iv) the proposed *building*, *construction* or *demolition* will not contravene any *applicable law*.

r_6 **(6)** The *chief building official* is not required to make a decision within the time period required by Sentence (1) with respect to an application that meets the requirements of Sentence (5) if the *chief building official*,

(a) determines that,

(i) the application is not accompanied by the plans, specifications, information and documents referred to in Subclauses (5)(f)(ii) and (iii), or

(ii) the proposed *building*, *construction* or *demolition* will contravene any *applicable law*, and

(b) advises the applicant of his or her determination and provides in writing the reasons for the determination within two days.

r_6 **(7)** Subject to Sentences (8) and (9), the time period described in Sentences (1) to (3) and in Clause (6)(b) shall begin on the day following the day on which an application that meets the requirements of Sentence (5) is submitted to the *chief building official*.

r_6 **(7.1)** The time periods described in Column 3 of Table 1.3.1.3. and in Clause (6)(b) shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

(8) The time period in Sentence (9) applies where

(a) an application is made for the *construction* of a *building* that is served by a *sewage system*,

(b) *construction* is proposed in respect of the *sewage system* that serves the *building*, and

r_1 (c) a board of health, conservation authority, planning board or the council of an upper-tier municipality is responsible for the enforcement of the provisions of the Act and this Code related to the *sewage system* under section 3.1 of the Act or pursuant to an agreement under section 6.2 of the Act.

r_6 **(9)** The time period described in Sentences (1) to (3) for an application referred to in Clause (8)(a) shall begin on the day following the later of
(a) the day on which an application that meets the requirements of Sentence (5) is submitted to the *chief building official*, and
(b) the day on which a permit for the *construction* of the *sewage system* referred to in Clause (8)(b) is issued.

r_6 **(10)** This Article, as it read immediately before subsection 2(2) of Schedule 21 to the *Good Government Act, 2009* comes into force, continues to apply to an application for a permit under subsection 8(1) of the Act that is submitted to a *chief building official* before that day.

Table 1.3.1.3.
Period Within Which Permit Shall be Issued or Refused
Forming Part of Article 1.3.1.3.

r_4

Row Number	Class of *Building*	Time Period
1	(a) A detached house, semi-detached house, townhouse, or row house where no *dwelling unit* is located above another *dwelling unit*. (b) A detached structure that serves a *building* described in Clause (a) and does not exceed 55 m^2 in *building area*. (c) A tent to which Section 3.14. of Division B applies. (d) A sign to which Section 3.15. of Division B applies.	10 days
2	(a) *Buildings* described in Clauses 1.1.2.4.(1)(a), (b) or (c) of Division A, other than *buildings* described in Column 2 of any of Rows 1 and 4 of this Table. (b) *Farm buildings* that do not exceed 600 m^2 in *building area*.	15 days
3	(a) *Buildings* described in Clauses 1.1.2.2.(1)(a) or (b) of Division A, other than *buildings* described in Column 2 of any of Rows 1 and 4 of this Table. (b) *Farm buildings* exceeding 600 m^2 in *building area*.	20 days
4	(a) *Post-disaster buildings*. (b) *Buildings* to which Subsection 3.2.6. of Division B or any provision in Articles 3.2.8.3. to 3.2.8.11. of Division B applies.	30 days
Column 1	2	3

1.3.1.4. Permits Under Section 10 of the Act

(1) Except as provided in Sentence (2), the following changes in use of a *building* or part of a *building* constitute an increase in hazard for the purposes of section 10 of the Act and require a permit under section 10 of the Act:

(a) a change of the *major occupancy* of all or part of a *building* that is designated with a "Y" in Table 1.3.1.4. takes place,

(b) a *suite* of a Group C *major occupancy* is converted into more than one *suite* of Group C *major occupancy*,

(c) a *suite* or part of a *suite* of a Group A, Division 2 or a Group A, Division 4 *major occupancy* is converted to a *gaming premises*,

(d) a *farm building* or part of a *farm building* is changed to a *major occupancy*,

(e) a *building* or part of a *building* is changed to a *post-disaster building*, or

(f) the use of a *building* or part of a *building* is changed and the previous *major occupancy* of the *building* or part of the *building* cannot be determined.

(2) A person is exempt from the requirement to obtain a permit under Section 10 of the Act where the change in use of the *building* or part of the *building* will result from proposed *construction* and a permit under Section 8 of the Act has been issued in respect of such *construction*.

(3) A person is exempt from the requirement to obtain a permit under Section 10 of the Act for the change of use of a *building* in unorganized territory.

Table 1.3.1.4.
Permit Required for Change of Use
Forming Part of Sentence 1.3.1.4.(1)(1)

r_1

		FROM(2)												
		A-1	A-2	A-3	A-4	B-1	B-2	B-3	C	D	E	F-1	F-2	F-3
TO(3)	A-1	N(5)	Y	Y	N(5)	Y	Y	Y	Y	Y	Y	Y	Y	Y
	A-2	Y	N(5)	Y	N(5)	Y	Y	Y	Y	Y	Y	Y	Y	Y
	A-3	Y	Y	N(5)	N(5)	Y	Y	Y	Y	Y	Y	Y	Y	Y
	A-4	Y	Y	Y	N(5)	Y	Y	Y	Y	Y	Y	Y	Y	Y
	B-1	Y	Y	Y	N(5)	N(5)	Y	Y	Y	Y	Y	Y	Y	Y
	B-2	Y	Y	Y	N(5)	Y	N(5)	Y	Y	Y	Y	Y	Y	Y
	B-3	Y	Y	Y	N(5)	Y	N(5)	N(5)	Y	Y	Y	Y	Y	Y
	C	Y	Y	Y	N(5)	Y	N(5)	N(5)	(4)	Y	Y	Y	Y	Y
	D	N(5)	N(5)	Y	N(5)	Y	N(5)	N(5)	Y	N(5)	Y	Y	N(5)	N(5)
	E	Y	Y	Y	N(5)	Y	Y	Y	Y	Y	N(5)	Y	Y	Y
	F-1	Y	Y	Y	N(5)	Y	Y	Y	Y	Y	Y	N(5)	Y	Y
	F-2	Y	Y	Y	N(5)	Y	Y	Y	Y	Y	Y	N(5)	N(5)	Y
	F-3	Y	N(5)	Y	N(5)	Y	Y	Y	Y	N(5)	N(5)	N(5)	N(5)	N(5)

Notes to Table 1.3.1.4.:

(1) See Clause 1.3.1.4.(1)(a) and Clauses 3.17.1.1.(1)(a) and 9.41.1.1.(1)(a) of Division B.

(2) *Major occupancy* of all or part of a *building* before change of use.

(3) *Major occupancy* of all or part of a *building* after change of use.

(4) See Clause 1.3.1.4.(1)(b) and Clauses 3.17.1.1.(1)(b), 9.41.1.1.(1)(b) and 11.4.2.3.(1)(b) of Division B.

(5) "N" is only applicable where the *major occupancy* of the entire *suite* is changed.

1.3.1.5. Conditional Permits

(1) The *chief building official* shall not issue a conditional permit for any stage of *construction* under subsection 8(3) of the Act unless compliance with the following *applicable laws* has been achieved in respect of the *construction* of the proposed *building*

(a) regulations made by a conservation authority under clause 28(1)(c) of the *Conservation Authorities Act* with respect to permission of the authority for the *construction* of a *building* or structure if, in the opinion of the authority, the control of flooding, erosion, dynamic beaches or pollution or the conservation of land may be affected by the development,

(b) section 5 of the *Environmental Assessment Act* with respect to the approval of the Minister or the Environmental Review Tribunal to proceed with an undertaking,

(c) subsection 24(3) of the *Niagara Escarpment Planning and Development Act*,

(c.1) subsection 27(3) of the *Ontario Heritage Act*,

(d) subsection 30(2) of the *Ontario Heritage Act* with respect to a consent of the council of a *municipality* to the alteration or *demolition* of a *building* where the council of the *municipality* has given a notice of intent to designate the *building* under subsection 29(3) of that Act,

(e) section 33 of the *Ontario Heritage Act* with respect to the consent of the council of a *municipality* for the alteration of property,

(f) section 34 of the *Ontario Heritage Act* with respect to the consent of the council of a *municipality* for the *demolition* of a *building*,

(g) section 34.5 of the *Ontario Heritage Act* with respect to the consent of the Minister to the alteration or *demolition* of a designated *building*,

(h) subsection 34.7 (2) of the *Ontario Heritage Act* with respect to a consent of the Minister to the alteration or *demolition* of a *building* where the Minister has given a notice of intent to designate the *building* under section 34.6 of that Act,

(h.1) by-laws made under section 40.1 of the *Ontario Heritage Act*,

(i) section 42 of the *Ontario Heritage Act* with respect to the permit given by the council of a *municipality* for the erection, alteration or *demolition* of a *building*.

(2) For the purposes of issuing a conditional permit under subsection 8(3) of the Act, a person is exempt from the requirement in clause 8(3)(a) of the Act of compliance with by-laws passed under sections 34 and 38 of the *Planning Act* where

(a) a committee of adjustment has made a decision under section 45 of the *Planning Act* authorizing one or more minor variances from the provisions of any by-laws made under sections 34 and 38 of that Act,

(b) such minor variance or variances result in the achievement of full compliance with such by-laws, and

(c) no person informed the committee of adjustment of objections to the minor variances either in writing or in person at the hearing of the application.

(3) For the purposes of issuing a conditional permit under subsection 8(3) of the Act, a person is exempt from the requirement in clause 8(3) of the Act of compliance with by-laws passed under sections 34 and 38 of the *Planning Act* where the *construction* in respect of which the conditional permit is issued is required in order to comply with an order issued under subsection 21(1) of the *Fire Protection and Prevention Act, 1997* or under Subsection 15.9(4) of the Act.

(4) A permit issued under Subsection 8(3) of the Act shall indicate its conditional nature.

r_6 1.3.1.6. Information to be Given to Tarion Warranty Corporation

(1) This Article prescribes, for the purposes of subsection 8(8.1) of the Act, the information relating to permits issued under section 8 of the Act and the applications for those permits that the *chief building official* is required to give to *Tarion Warranty Corporation* and the time within which the information is required to be given.

(2) The *chief building official* shall give the following information to *Tarion Warranty Corporation* with respect to permits issued under section 8 of the Act on or after the day subsection 2(3) of Schedule 21 to the *Good Government Act, 2009* comes into force in respect of the *construction* of *buildings* described in Sentence (4),

(a) the dates the permits are issued and the numbers or other identifying symbols for the permits, and

(b) the information contained in the application forms submitted in respect of the permits, other than the information contained in the schedules or other attachments to the application forms.

(3) Despite Sentence (2), the *chief building official* is not required to give to *Tarion Warranty Corporation* information which relates to the extension or material alteration or repair of an existing *building*.

(4) The *buildings* referred to in Sentence (2) are any *building* whose proposed use is classified as a Group C *major occupancy* and which is not a *boarding, lodging or rooming house* or a *building* containing a *hotel*.

(5) The *chief building official* shall give the information described in Sentence (2) within 45 days after the day on which the permits to which the information relates are issued.

(6) The time period described in Sentence (5) shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

1.3.2. Site Documents

1.3.2.1. Permit Posting

(1) Where a permit has been issued pursuant to the Act, the person to whom it is issued shall have the permit or a copy of it posted at all times during *construction* or *demolition* in a conspicuous place on the property in respect of which the permit was issued.

1.3.2.2. Documentation on Site

(1) The person in charge of the *construction* of the *building* shall keep and maintain on the site of the *construction*

(a) at least one copy of drawings and specifications certified by the *chief building official* or a person designated by the *chief building official* to be a copy of those submitted with the application for the permit to *construct* the *building*, together with changes that are authorized by the *chief building official* or a person designated by the *chief building official*, and

(b) authorization or facsimiles of it received from the Building Materials Evaluation Commission, including specified terms and conditions.

1.3.3. Occupancy of Unfinished Building

1.3.3.1. Occupancy Permit

(1) Except as permitted in Sentence 1.3.3.2.(1), a person may occupy or permit to be occupied any *building* or part of it that has not been fully completed at the date of occupation where the *chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it prior to its completion in accordance with Sentence (2).

(2) The *chief building official* or a person designated by the *chief building official* shall issue a permit authorizing occupation of a *building*, where

(a) the structure of the *building* or part of it is completed to the roof,

(b) the enclosing walls of the *building* or part of it are completed to the roof,

(c) the walls enclosing the space to be occupied are completed, including balcony *guards*,

(d) all required *fire separations* and *closures* are completed on all *storeys* to be occupied,

(e) all required *exits* are completed and fire separated including all doors, door hardware, self-closing devices, balustrades and handrails from the uppermost floor to be occupied down to *grade* level and below if an *exit* connects with lower *storeys*,

(f) all shafts including *closures* are completed to the floor-ceiling assembly above the *storey* to be occupied and have a temporary *fire separation* at such assembly,

(g) measures have been taken to prevent access to parts of the *building* and site that are incomplete or still under *construction*, Similarly, where a SDHW system has a double-wall heat exchanger and there is a permanent direct connection between the heat transfer loop and the potable water system, the selection of the required backflow preventer would be determined in accordance with Sentence 7.6.2.4.(5), based on the type of heat transfer fluid used and other risks.

The requirement for premise isolation would be determined based on the use and the occupancy of the entire building. In most cases, the installation of a domestic solar hot water system that has a direct connection to a potable water system, alone, would not require the premise isolation referenced in Sentence 7.6.2.4.(9).

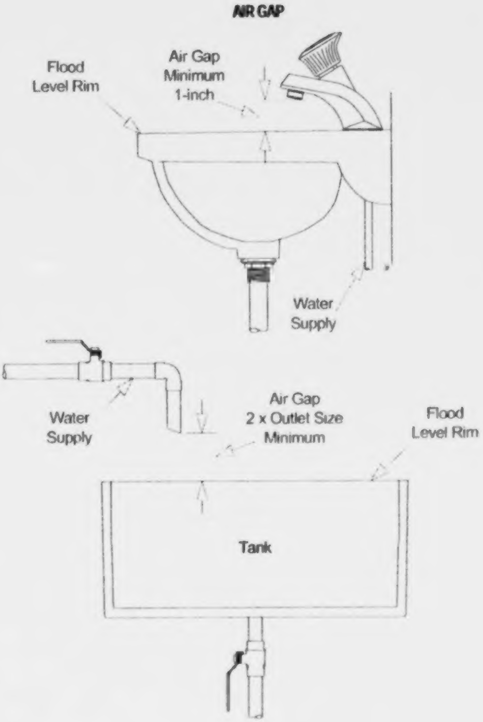
"Relatively harmless" as defined in CSA-F379.1, "Packaged Solar Domestic Hot Water Systems (Liquid-to-Liquid Heat Transfer) for All-Season Use" as a fluid having an oral LD50 of 15,000 mg/kg or greater, in accordance with Toxicity Class 6 (relatively harmless) of the Hodge and Sterner scale. The Hodge and Sterner scale is a toxicity scale recognized by the Canadian Centre for Occupational Health and Safety that provides ratings from 1 (extremely toxic) to 6 (relatively harmless) based on the LD 50 approach for oral administration. LD stands for "Lethal Dose". LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals. The LD50 is one way to measure the short-term poisoning potential (acute toxicity) of a material.

Information is published in the material safety data sheets supplied with all heat-transfer fluid shipments, as required by Canadian law.

A-7.6.2.9.(2) Air Gap. (See page 108)

a_4 **A-7.6.4.2.(3) Plumbing Fixtures.** Heritage buildings including homes, may contain sanitary drainage piping that is sized in accordance with the flush cycle of period plumbing fixtures. Operational difficulties maybe encountered when these fixtures are replaced with one having a lower flush cycle.

A - 7.6.2.9.


AIR GAP
Flood Level Rim
Air Gap Minimum 1-inch
Water Supply
Water Supply
Air Gap 2 x Outlet Size Minimum
Flood Level Rim
Tank

Supplementary Standard SA-1

Objectives and Functional Statements Attributed to the Acceptable Solutions

January 1, 2011

COMMENCEMENT

Supplementary Standard SA-1 comes into force on the 31st day of December, 2006.

m_8 Ruling of the Minister of Municipal Affairs and Housing (Minister's Ruling) MR-09-S-09 takes effect on the 1st day of January, 2010.
m_{10} Ruling of the Minister of Municipal Affairs and Housing (Minister's Ruling) MR-09-S-11 takes effect on the 1st day of January, 2011.

ERRATA

e_1 Issued April 2nd, 2007.
e_4 Issued January 1st, 2010.

© Copyright

© Copyright Queen's Printer for Ontario 2010

All rights reserved.

Questions regarding copyright, including reproduction and distribution, may be directed to the Director, Building and Development Branch of the Ministry of Municipal Affairs and Housing.

Acceptable Solution	Objective and Functional Statement
(6)	[F20, F81-OP1.1]
	[F20, F81-OS1.1]
	[F20, F81-OS2.3]
	[F31, F81-OS3.2]
(7)	[F20, F81-OP1.1]
	[F20, F81-OS1.1]
	[F20, F81-OS2.3]
	[F31, F81-OS3.2]
7.6.1.13.	**Solar Domestic Hot Water Systems**
(1)	[F70-OH2.2]
	[F20-OS2.2, OS2.3]
	[F31-OS3.2] [F81-OS3.4]
(2)	[F61-OH1.3]
	[F70-OH2.2]
	[F20-OS2.2, OS2.3]
	[F31-OS3.2] [F81-OS3.4]
7.6.1.14.	**Water Hammer**
(1)	[F20-OH4]
	[F20, F81-OP5]
	[F20, F81-OS3.2]
7.6.1.15.	**Mobile Home Water Service**
(1)	[F46, F70-OH2.2]
7.6.1.16.	**Thermal Expansion**
(1)	[F20, F46, F81-OP5]
7.6.2.1.	**Connection of Systems**
(1)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(2)	[F46, F70, F81-OH2.2]
7.6.2.2.	**Back Siphonage**
(1)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(2)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(3)	[F81-OH2.1] [F46, F70, F81-OH2.2]
7.6.2.3.	**Reserved.**
7.6.2.4.	**BackFlow from Fire Protection Systems.**
(1)	
(2)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(3)	[F02, F12, F81-OP1.2]
	[F02, F12, F81-OS1.2]
(4)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(5)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(6)	
(7)	
(8)	
(9)	[F81-OH2.1] [F46, F70, F81-OH2.2]

Acceptable Solution	Objective and Functional Statement
m_8 **7.6.2.5.**	**Backflow from Buildings with a Solar Domestic Hot Water System**
(1)	[F70, F81, F46-OH2.1, OH 2.2, OH2.3]
(2) to (4)	
7.6.2.6.	**Reserved.**
7.6.2.7.	**Reserved.**
7.6.2.8.	**Cleaning of Systems**
(1)	[F81-OH2.1] [F46, F70, F81-OH2.2]
7.6.2.9.	**Air Gap**
(1)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(2)	[F81-OH2.1] [F46, F70, F81-OH2.2]
7.6.2.10.	**Vacuum Breakers and Flood Levels**
(1)	
(2)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(3)	[F81-OH2.1] [F46, F70, F81-OH2.2]
(4)	[F81-OH2.1] [F46, F70, F81-OH2.2]
7.6.3.1.	**Design**
(1)	[F70, F81-OH2.2]
(2)	
(3)	
(4)	[F70, F81-OH2.2]
(5)	[F70, F81-OH2.2] [F40-OH2.1, OH2.4]
7.6.3.2.	**Hydraulic Load**
(1)	[F70, F81-OH2.2]
(2)	[F70, F81-OH2.2]
(3)	[F70, F81-OH2.2]
7.6.3.3.	**Static Pressure**
(1)	[F20, F81-OP1.1]
	[F20, F81-OP5]
	[F20, F81-OS1.1]
	[F20, F81-OS2.3]
	[F31, F81-OS3.2] Applies to pipes containing hot water
7.6.3.4.	**Size**
(1)	[F70, F81-OH2.2]
7.6.4.1.	**Water Supply Fittings**
(1)	[F130-OR1]
(2)	
m_{10} **7.6.4.2.**	**Plumbing Fixtures**
(1)	[F130-OR1]
(2)	[F130-OR1]
(3)	

Important Notice

These amendments are effective January 1, 2012.

These pages, which have shaded bars at the bottom, are to replace the existing corresponding pages on January 1, 2012.

Backwater valve means a *check valve* designed for use in a gravity *drainage system*.

Barrier-free means, when applied to a *building* and its facilities, that the *building* and its facilities can be approached, entered and used by persons with physical or sensory disabilities.

r₄ *Basement* means one or more *storeys* of a *building* located below the *first storey*.

Bathroom group means a group of plumbing *fixtures* installed in the same room, consisting of one domestic-type lavatory, one water closet and either one bathtub, with or without a shower, or one one-headed shower.

Boiler means an *appliance* intended to supply hot water or steam for space heating, processing or power purposes.

Bottle trap means a *trap* that retains water in a closed chamber and that seals the water by submerging the inlet pipe in the liquids or by a partition submerged in the liquids.

Branch means a *soil* or *waste pipe* that is connected at its upstream end to the junction of two or more *soil* or *waste pipes* or to a *soil* or *waste stack* and that is connected at its downstream end to another *branch*, a sump, a *soil* or *waste stack* or a *building drain*.

Branch vent means a *vent pipe* that is connected at its lower end to the junction of two or more *vent pipes* and that, at its upper end, is connected to another *branch vent*, a *stack vent*, a *vent stack* or a *header*, or terminates in *open air*.

Building area means the greatest horizontal area of a *building* above *grade*,
- (a) within the outside surface of exterior walls, or
- (b) within the outside surface of exterior walls and the centre line of *firewalls*.

r₄ *Building Code website* means the website at www.ontario.ca/buildingcode.

Building control valve means the valve on a *water system* that controls the flow of *potable* water from the *water service pipe* to the *water distribution system*.

Building drain means the lowest horizontal piping, including any vertical *offset*, that conducts *sewage*, *clear-water waste* or storm water by gravity to a *building sewer*.

Building height means the number of *storeys* contained between the roof and the floor of the *first storey*.

Building sewer means a *sanitary building sewer* or *storm building sewer*.

Building trap means a *trap* that is installed in a *sanitary building drain* or *sanitary building sewer* to prevent circulation of air between the *sanitary drainage system* and a public sewer.

Business and personal services occupancy means the *occupancy* or use of a *building* or part of a *building* for the transaction of business or the provision of professional or personal services.

Camp for housing of workers means a camp in which *buildings* or other structures or premises are used to accommodate five or more employees.

Campground means land or premises used as an overnight camping facility that is not a *recreational camp*.

Care and treatment occupancy (Group B, Division 2) means an *occupancy* in which persons receive special care and treatment.

Care occupancy (Group B, Division 3) means an *occupancy* in which persons receive special or supervisory care because of cognitive or physical limitations, but does not include a *dwelling unit*.

Care or detention occupancy means the *occupancy* or use of a *building* or part of a *building* by persons who,
(a) are dependent on others to release security devices to permit egress,
(b) receive special care and treatment, or
(c) receive supervisory care.

r_7 *Certificate for the occupancy of a building described in Sentence 1.3.3.4.(4) of Division C* means a certificate described in Sentence 3.7.4.3.(5.1) of Division C.

r_4 *Certificate for the occupancy of a building not fully completed* means a certificate described in Sentence 3.7.4.3.(5) of Division C.

Check valve means a valve that permits flow in only one direction and prevents a return flow.

Division C

Administrative Provisions

Part 1
General

Section 1.1. Administration

1.1.1. Administration 3

Section 1.2. Design and General Review

1.2.1. Design 3
1.2.2. General Review 7

Section 1.3. Permits and Inspections

1.3.1. Permits 8
1.3.2. Site Documents 16a
1.3.3. Occupancy of Buildings 16a
1.3.4. Fire Department Inspection 19
1.3.5. Notices and Inspections 20
1.3.6. As Constructed Plans 22

Section 1.4. Search Warrant

1.4.1. Forms 22

Section 1.5. Designated Persons and Powers

1.5.1. General 25

Section 1.6. Prescribed Person

1.6.1. General 25

Section 1.9. Fees

1.9.1. Fees 26

(5) The *chief building official* shall give the information described in Sentence (2) within 45 days after the day on which the permits to which the information relates are issued.

(6) The time period described in Sentence (5) shall not include Saturdays, holidays and all other days when the offices of the *principal authority* are not open for the transaction of business with the public.

1.3.2. Site Documents

1.3.2.1. Permit Posting

(1) Where a permit has been issued pursuant to the Act, the person to whom it is issued shall have the permit or a copy of it posted at all times during *construction* or *demolition* in a conspicuous place on the property in respect of which the permit was issued.

1.3.2.2. Documentation on Site

(1) The person in charge of the *construction* of the *building* shall keep and maintain on the site of the *construction*

(a) at least one copy of drawings and specifications certified by the *chief building official* or a person designated by the *chief building official* to be a copy of those submitted with the application for the permit to *construct* the *building*, together with changes that are authorized by the *chief building official* or a person designated by the *chief building official*, and

(b) authorization or facsimiles of it received from the Building Materials Evaluation Commission, including specified terms and conditions.

r$_7$ 1.3.3. Occupancy of Buildings

r$_7$ 1.3.3.1. Occupancy Permit - General

(1) Except as permitted in Sentence 1.3.3.2.(1), a person may occupy or permit to be occupied any *building* or part of it that has not been fully completed at the date of occupation where the *chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it prior to its completion in accordance with Sentence (2).

r$_7$ **(1.1)** Sentence (1) does not apply in respect of the occupancy of a *building* to which Article 1.3.3.4. applies.

(2) The *chief building official* or a person designated by the *chief building official* shall issue a permit authorizing occupation of a *building*, where

(a) the structure of the *building* or part of it is completed to the roof,
(b) the enclosing walls of the *building* or part of it are completed to the roof,
(c) the walls enclosing the space to be occupied are completed, including balcony *guards*,
(d) all required *fire separations* and *closures* are completed on all *storeys* to be occupied,
(e) all required *exits* are completed and fire separated including all doors, door hardware, self-closing devices, balustrades and handrails from the uppermost floor to be occupied down to *grade* level and below if an *exit* connects with lower *storeys*,
(f) all shafts including *closures* are completed to the floor-ceiling assembly above the *storey* to be occupied and have a temporary *fire separation* at such assembly,
(g) measures have been taken to prevent access to parts of the *building* and site that are incomplete or still under *construction*,
(h) floors, halls, lobbies and required *means of egress* are kept free of loose materials and other hazards,
(i) if service rooms should be in operation, required *fire separations* are completed and all *closures* installed,
(j) all *building drains*, *building sewers*, *water systems*, *drainage systems* and *venting systems* are complete and tested as operational for the *storeys* to be occupied,
(k) required lighting, heating and electrical supply are provided for the *suites*, rooms and common areas to be occupied,
(l) required lighting in corridors, stairways and *exits* is completed and operational up to and including all *storeys* to be occupied,
(m) required standpipe, sprinkler and fire alarm systems are complete and operational up to and including all *storeys* to be occupied, together with required pumper connections for such standpipes and sprinklers,
(n) required fire extinguishers have been installed on all *storeys* to be occupied,
(o) main garbage rooms, chutes and ancillary services thereto are completed to *storeys* to be occupied,
(p) required fire fighting access routes have been provided and are accessible, and
(q) the *sewage system* has been completed and is operational.

(3) Where a *registered code agency* has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of the *building*, the *chief building official* or a person designated by the *chief building official* shall issue the permit referred to in Sentence (2) after receipt of a *certificate for the occupancy of a building not fully completed* issued by the *registered code agency* in respect of the *building*.

1.3.3.2. Conditions for Residential Occupancy

(1) A person may occupy or permit to be occupied a *building* intended for *residential occupancy* that has not been fully completed at the date of occupation provided that

- (a) the *building*
  - (i) is of three or fewer *storeys* in *building height* and has a *building area* not exceeding 600 m^2,
  - (ii) has not more than 1 *dwelling unit* above another *dwelling unit*,
  - (iii) has not more than 2 *dwelling units* sharing a common *means of egress*, and
  - (iv) has no accommodation for tourists,
- (b) the following *building* components and systems are complete, operational and inspected:
  - (i) required *exits*, handrails and *guards*, fire alarm and detection systems, and *fire separations*,
  - (ii) required exhaust fume barriers and self-closing devices on doors between an attached or built-in garage and a *dwelling unit*, and
  - (iii) water supply, sewage disposal, lighting and heating systems,
- (c) the following *building* components and systems are complete, operational, inspected and tested:
  - (i) *water systems*,
  - (ii) *building drains* and *building sewers*, and
  - (iii) *drainage systems* and *venting systems*, and
- (d) where applicable, the *building* conforms to Article 3.1.1.3. or 9.1.1.7. of Division B.

r_7 **(2)** Sentence (1) does not apply in respect of the occupancy of a *building* to which Article 1.3.3.4. applies.

1.3.3.3. Notification

r_7 **(1)** Where a person has occupied or permitted the occupancy of a *building* under Article 1.3.3.1. or 1.3.3.2. such person shall notify the *chief building official* forthwith upon completion of the *building*.

r_7 1.3.3.4. Occupancy Permit — Certain Buildings of Residential Occupancy

(1) No person shall occupy or permit to be occupied a *building* described in Sentence (4), or part of it, unless the *chief building official* or a person designated by the *chief building official* has issued a permit authorizing occupation of the *building* or part of it in accordance with Sentence (5).

(2) This Article applies in respect of the occupancy of a *building* described in Sentence (4) if a permit for the *construction* of the *building* has been applied for after December 31, 2011.

(3) This Article does not apply in respect of the occupancy of an existing *building*, or part of it, that has been subject to extension or material alteration or repair.

(4) A *building* referred to in Sentence (1) is a *building* intended for *residential occupancy* that,
(a) is of three or fewer *storeys* in *building height* and has a *building area* not exceeding 600 m^2,
(b) has no accommodation for tourists,
(c) does not have a *dwelling unit* above another *dwelling unit*, and
(d) does not have any *dwelling units* sharing a common *means of egress*.

(5) The *chief building official* or a person designated by the *chief building official* shall issue a permit authorizing occupation of a *building* described in Sentence (4), where,
(a) the structure of the *building* with respect to the *dwelling unit* to be occupied is substantially complete and ready to be used for its intended purpose,
(b) the *building* envelope, including, but not limited to, cladding, roofing, windows, doors, assemblies requiring *fire-resistance ratings*, *closures*, insulation, *vapour barriers* and air barriers, with respect to the *dwelling unit* to be occupied, is substantially complete,

(c) the walls enclosing the *dwelling unit* to be occupied conform to Sentence 9.25.2.3.(7) of Division B,
(d) site grading with respect to the *building* is substantially complete,
(e) required electrical supply is provided for the *dwelling unit* to be occupied,
(f) required fire fighting access routes to the *building* have been provided and are accessible,
(g) the following *building* components and systems are complete and operational for the *dwelling unit* to be occupied:
  (i) required *exits*, floor access and egress systems, handrails, *guards*, *smoke alarms*, carbon monoxide detectors and *fire separations*, including, but not limited to, fire stopping,
  (ii) required exhaust fume barriers and self-closing devices on doors between an attached or built-in garage and the *dwelling unit*, and
  (iii) water supply, sewage disposal, lighting and heating systems,
(h) the following *building* components and systems are complete, operational and tested for the *dwelling unit* to be occupied:
  (i) *water system*,
  (ii) *building drain* and *building sewer*, and
  (iii) *drainage system* and *venting system*,
(i) required *plumbing fixtures* in the *dwelling unit* to be occupied are substantially complete and operational, and
(j) where applicable, the *building* conforms to Article 9.1.1.7. of Division B with respect to the *dwelling unit* to be occupied.

(6) Where a *registered code agency* has been appointed to perform the functions described in clause 4.1 (4)(b) or (c) of the Act in respect of the *construction* of a *building* described in Sentence (4), the *chief building official* or a person designated by the *chief building official* shall issue the permit referred to in Sentence (5) after receipt of a *certificate for the occupancy of a building described in Sentence 1.3.3.4.(4) of Division C* issued by the *registered code agency* in respect of the *building*.

1.3.4. Fire Department Inspection

1.3.4.1. Fire Department Approval

(1) Subject to Sentence (2), if the council of a *municipality* assigns specific responsibility for the enforcement of any portion of this Code respecting fire safety matters to an *inspector* who is the chief of the fire department of the *municipality*, the *chief building official* shall not issue a permit to *construct* a *building* unless the *inspector* approves the drawings submitted with the application for the permit as complying with that portion of this Code.

(2) If a *registered code agency* has been appointed under clause 4.1(4)(a) or (c) of the Act
(a) a *municipality* shall not assign responsibility under Sentence (1) to the chief of the fire department with respect to a *building* for which the *registered code agency* has been appointed, and
(b) any assignment of responsibility under Sentence (1) with respect to a *building* for which the *registered code agency* is appointed shall be cancelled as of the date of the appointment.

1.3.5. Notices and Inspections

1.3.5.1. Prescribed Notices

(1) This Article sets out the notices that are required under section 10.2 of the Act.

(2) The person to whom a permit under section 8 of the Act is issued shall notify the *chief building official* or, where a *registered code agency* is appointed under the Act in respect of the *construction* to which the notice relates, the *registered code agency* of:
(a) readiness to *construct* footings,
(b) substantial completion of footings and *foundations* prior to commencement of backfilling,
(c) substantial completion of structural framing and ductwork and piping for heating and *air-conditioning* systems, if the *building* is within the scope of Part 9 of Division B,
(d) substantial completion of structural framing and roughing-in of heating, ventilation, *air-conditioning* and air-contaminant extraction equipment, if the *building* is not a *building* to which Clause (c) applies,
r_7 (e) substantial completion of insulation and *vapour barriers*,
r_7 (e.1) substantial completion of *air barrier systems*,
(f) substantial completion of all required *fire separations* and *closures* and all fire protection systems including standpipe, sprinkler, fire alarm and emergency lighting systems,
(g) substantial completion of fire access routes,
(h) readiness for inspection and testing of:
  (i) *building sewers* and *building drains*,
  (ii) *water service pipes*,
  (iii) *fire service mains*,
  (iv) *drainage systems* and *venting systems*,
  (v) the *water distribution system*, and
  (vi) *plumbing* fixtures and *plumbing* appliances,

(i) readiness for inspection of suction and gravity outlets, covers and suction piping serving outlets of an *outdoor pool* described in Clause 1.3.1.1.(1)(j) of Division A, a *public pool* or a *public spa*,
(j) substantial completion of the circulation / *recirculation system* of an *outdoor pool* described in Clause 1.3.1.1.(1)(j) of Division A, a *public pool* or *public spa* and substantial completion of the pool before it is first filled with water,
(k) readiness to *construct* the *sewage system*,
(l) substantial completion of the installation of the *sewage system* before the commencement of backfilling,
r_7 (m) substantial completion of installation of *plumbing* not located in a structure, before the commencement of backfilling,
r_7 (n) completion of *construction* and installation of components required to permit the issue of an occupancy permit under Sentence 1.3.3.1.(2) or to permit occupancy under Sentence 1.3.3.2.(1), if the *building* or part of the *building* to be occupied is not fully completed, and
r_7 (o) completion of *construction* and installation of components required to permit the issue of an occupancy permit under Sentence 1.3.3.4.(5).

1.3.5.2. Additional Notices

(1) A *principal authority* may pass a by-law or resolution or make a regulation under clause 7(1)(e) of the Act, as part of its responsibility for the enforcement of the Act, in order to establish time periods within which notice of one or more of the following stages of *construction* must be given:

(a) commencement of *construction* of the *building*,
(b) substantial completion of structural framing for each *storey*, if the *building* is a type of *building* that is within the scope of Parts of Division B other than Part 9 of Division B,
(c) commencement of *construction* of:
    (i) masonry fireplaces and masonry *chimneys*,
    (ii) factory-built fireplaces and allied *chimneys*,
    (iii) *stoves*, *ranges*, *space heaters* and add-on *furnaces* using solid fuels and allied *chimneys*,
(d) substantial completion of interior finishes,
(e) substantial completion of heating, ventilating, *air-conditioning* and air-contaminant extraction equipment,
(f) substantial completion of exterior cladding,
(g) substantial completion of site grading,

r₇ (h) substantial completion of the pool deck and dressing rooms for a *public pool* or *public spa* and readiness for inspection of the emergency stop system for a *public pool* or *public spa*,

r₇ (i) completion and availability of drawings of the *building* as constructed, and

r₇ (j) completion of a *building* for which an occupancy permit is required under Article 1.3.3.4.

(2) The person to whom a permit under section 8 of the Act is issued shall notify the *chief building official* or, if a *registered code agency* is appointed under the Act in respect of the *construction* to which the notice relates, the *registered code agency* of the stages of *construction* for which a time period for giving notice is required under Sentence (1).

(5) A *registered code agency* may issue a *certificate for the occupancy of a building not fully completed* if the *registered code agency*
- (a) has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of the *building* to which the *certificate for the occupancy of a building not fully completed* applies,
- (b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
- (c) is satisfied on reasonable grounds that, on the date on which the *certificate for the occupancy of a building not fully completed* is issued, the *construction* of the *building* to which the *certificate for the occupancy of a building not fully completed* relates is in compliance with Clauses 1.3.3.1.(2)(a) to (q).

r_7 **(5.1)** A *registered code agency* may issue a *certificate for the occupancy of a building described in Sentence 1.3.3.4.(4) of Division C* if the *registered code agency*,
- (a) has been appointed to perform the functions described in clause 4.1 (4)(b) or (c) of the Act in respect of the *construction* of a *building* described in Sentence 1.3.3.4.(4) to which the certificate applies,
- (b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
- (c) is satisfied on reasonable grounds that, on the date on which the *certificate for the occupancy of a building described in Sentence 1.3.3.4.(4) of Division C* is issued, the *construction* of the *building* to which the certificate relates is in compliance with Clauses 1.3.3.4.(5)(a) to (j).

(6) A *registered code agency* may issue a *final certificate* if the *registered code agency*
- (a) has been appointed to perform the functions described in clause 4.1(4)(b) or (c) of the Act in respect of the *construction* of the *building* to which the *final certificate* applies,
- (b) has, in conformity with the Act, this Code and the quality management plan described in Clause 3.4.3.2.(1)(d), carried out the applicable functions for which the *registered code agency* was appointed, and
- (c) is satisfied on reasonable grounds that on the date on which the *final certificate* is issued, the *construction* of the *building* to which the *final certificate* relates is in compliance with this Code.

(7) Every certificate issued under the Act by a *registered code agency* shall be in a form approved by the *Minister*.

3.7.4.4. Issuance of Orders by Registered Code Agencies

(1) Orders under subsections 13(6) and 14(1) of the Act shall, in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d), be signed by the *registered code agency* or a person described in Clause 3.4.3.2.(1)(a).

(2) Orders under subsections 12(2) and 13(1) and clause 18(1)(f) of the Act shall, in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d), be signed by the *registered code agency* or by a person described in Clause 3.4.3.2.(1)(b) or (c).

3.7.4.5. Authorized Persons

(1) Persons who possess the qualifications described in Clauses 3.4.3.2.(1)(a), (b) and (c) are prescribed for the purposes of subsection 15.17(1) of the Act.

(2) The certificate of authorization referred to in subsection 15.17(2) of the Act shall, in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d), be signed by a representative of the *registered code agency* who is described in Clause 3.4.3.2.(1)(a) and shall contain the following information

(a) the name of the *registered code agency* and any identifying number issued by the *director* to the *registered code agency*,

(b) the title, business address and business telephone number of a representative of the *registered code agency* who may be contacted to answer questions about the certificate and the authorization to which it relates,

(c) the name of the authorized person and any identifying number issued by the *director* to the authorized person in respect of that person's qualifications,

(d) the scope of the powers that may be exercised and the functions that may be performed by the authorized person,

(e) the date of issuance of the certificate.

(3) Every person described in Sentence (1) shall carry his or her certificate of authorization when performing duties and shall produce the certificate for inspection upon request.

3.7.4.6. Prohibition

(1) A *registered code agency* shall not dismiss, suspend, demote, discipline, harass or otherwise disadvantage an employee, or deny an employee a benefit of employment, by reason that
(a) the employee, acting in good faith and on the basis of reasonable belief, has disclosed to the *director* that the *registered code agency* or any other person has contravened or intends to contravene a provision of the Act or this Code,
(b) the employee, acting in good faith and on the basis of reasonable belief, has refused or stated an intention of refusing to do anything that is a contravention of a provision of the Act or this Code,
(c) the employee, acting in good faith and on the basis of reasonable belief, has done or stated an intention of doing anything that is required to be done in order that a provision of the Act or this Code not be contravened, or
(d) the *registered code agency* believes that the employee will do anything referred to in Clause (a), (b) or (c).

(2) Nothing in this Section impairs any right of an employee either at law or under an employment contract or collective agreement.

(3) In this Article

"employee" includes an independent contractor and "employer" includes the person who retains an employee who is an independent contractor.

3.7.4.7. Information and Records

(1) The *registered code agency* shall maintain records of all plans review and inspection activity, of all certificates and orders and of any other activities taken in carrying out functions under an appointment in accordance with the quality management plan described in Clause 3.4.3.2.(1)(d).

(2) Any information collected by a *registered code agency* in the course of the exercise of powers and the performance of duties under this Act may be used only for the purpose of performing functions under an appointment under subsection 4.1(2) of the Act and may be disclosed only
(a) to a *principal authority* pursuant to an agreement under subsection 4.1(1) of the Act,
(b) to a *principal authority* to aid the enforcement in any manner of the Act,
(c) where required or permitted under this Act, this Code, other applicable legislation or an order of a court.

(3) A *registered code agency* shall ensure that any agreement under which the *registered code agency* engages a person to assist the *registered code agency* to perform functions under an appointment includes a provision that requires the person to comply with Sentences (1) and (2).

3.7.5. Termination of Appointment of a Registered Code Agency

3.7.5.1. Termination of an Appointment Made under Subsection 4.1(2) of the Act

(1) A *principal authority* may, in accordance with the terms of an agreement under subsection 4.1(1) of the Act, terminate the appointment of a *registered code agency* before the appointment expires under section 15.19 of the Act.

3.7.6. Information to be Provided

3.7.6.1. Information to be Provided by a Principal Authority to the Director

(1) If a *principal authority* that has appointed a *registered code agency* terminates the appointment before the appointment expires under section 15.19 of the Act, the *principal authority* shall, as soon as possible after the termination, give the *director* notice of the termination and such other information concerning the circumstances of the termination and as may be required by the *director*.

(2) If a *principal authority* has issued an order under subsection 15.21(1) of the Act, the *principal authority* shall as soon as possible after the order is issued give the *director* a copy of the order and such other information concerning the circumstances of the order and as may be required by the *director*.

3.7.6.2. Information to be Provided by a Registered Code Agency to the Director

(1) A *registered code agency* that becomes or expects to become unable to carry out the functions for which the *registered code agency* was appointed shall as soon as possible give notice to the *director* of this situation.

Ontario